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The Nebraska State Medical Journal

That blasts of January
Would blow you through and through.

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A 63-year-old man who ingested malathion became unconcious and developed distress and hypotension. Electrocardiogram showed atrioventricular block and idioventricular rhythm of 10 to 35 per minute which disappeared after administration of atropine. These ECG changes in organophosphate poisoning have been observed in experimental animals but rarely noted in man. Malathion, though one of the least toxic insecticides, has caused many incidents of poisoning in man. Compared with poisoning with other organophosphate insecticides, malathion poisoning is characterized by severe manifestations and a prolonged course probably due to continuous absorption of ingested malathion. Atropine has been effective, but the effect of pralidoxime has often been unsatisfactory. The incidence of malathion poisoning is expected to increase since malathion is replacing halogenated hydrocarbon insecticides.

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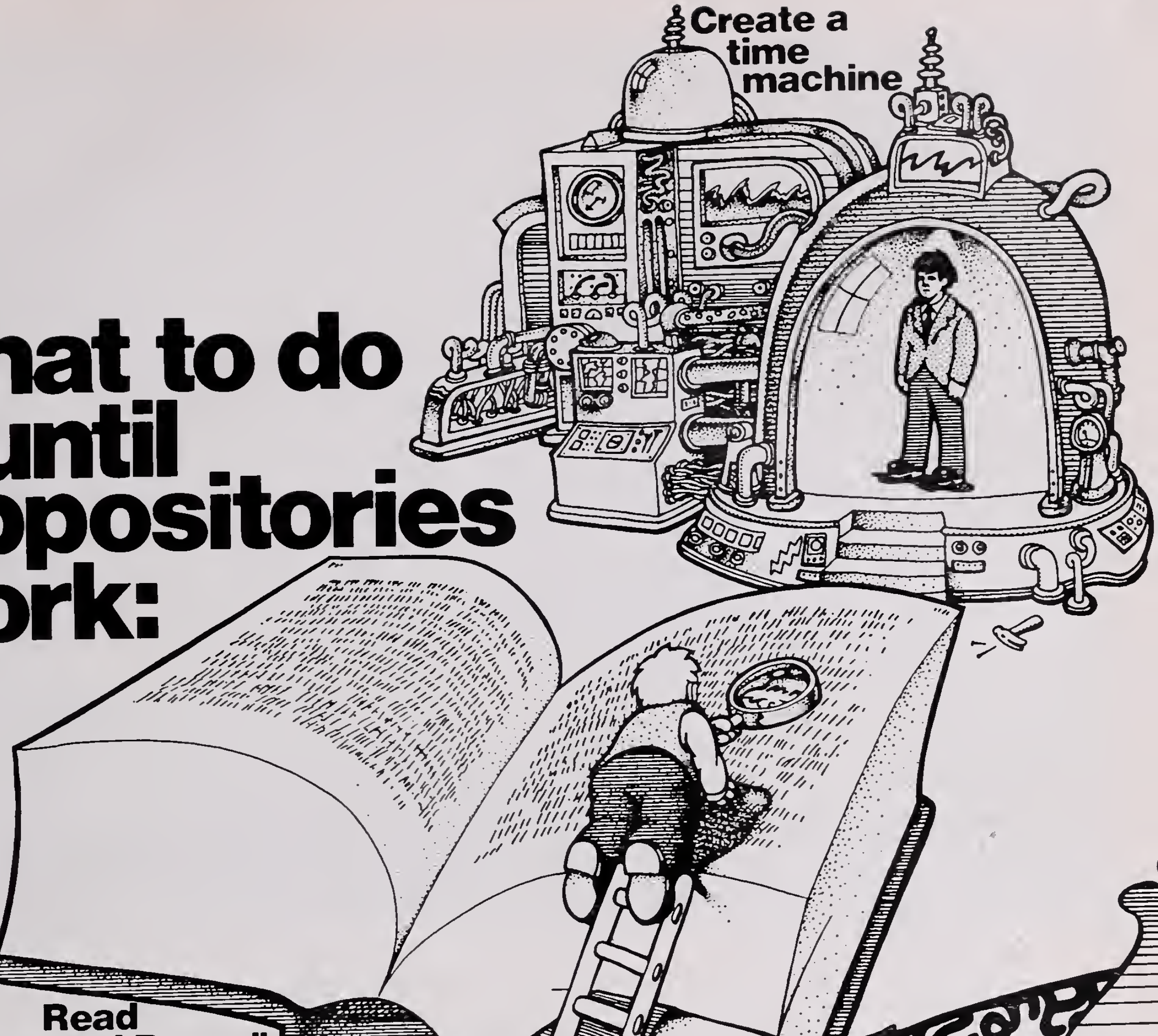

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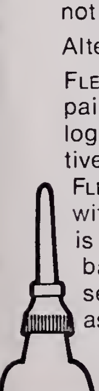

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References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964

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Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
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PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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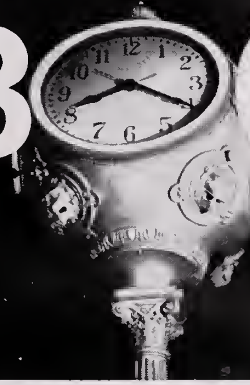

Shirodkar Suture — M. Y. Bacchus and D. M. Hay (Univ Hosp of the West Indies, Kingston, Jamaica). Amer J Obstet Gynec 108:250-252 (Sept 15) 1970.

Of 104 Shirodkar sutures inserted in 79 patients with cervical incompetence, 103 were inserted during pregnancy. The patients in this study were allocated to one of the following groups: Group A, with a history of two or more consecutive midtrimester abortions with a typical history of cervical incompetence, plus evidence of incompetence obtained when nonpregnant; group B, those with a typical history of cervical incompetence in two or more consecutive pregnancies ending in midtrimester abortions but no other evidence of incompetence; and group C, those with repeated abortions but with no true evidence of history of cervical incompetence. The success rates improved in all three groups, but the improvement was not significant. The number of successful pregnancies before and after cervical encerclage in each group was analyzed. Highly significant results were obtained in each group and for the whole series. The operation is safe for both mother and fetus, but the important contraindications of uterine bleeding, uterine activity, ruptured membranes, and an almost fully dilated cervix must be observed.

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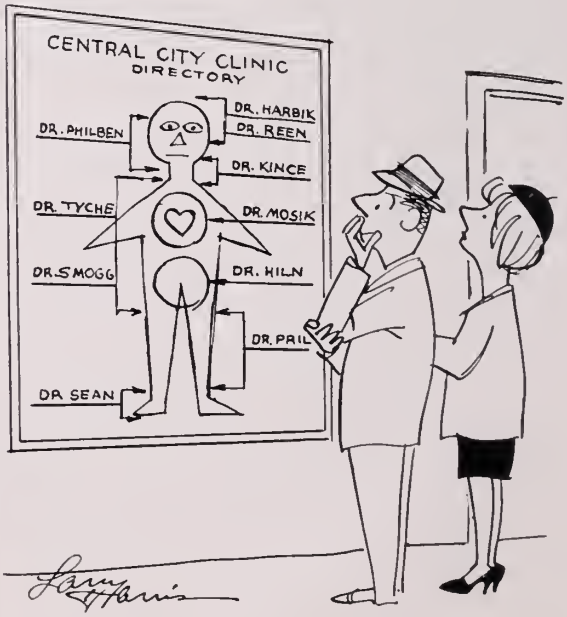
Cytology of Human Milk — C. Simon et al (K. Lennert, Hospitalstrasse 42, Kiel, West Germany). Schweiz Med Wschr 100:1603-1609 (Sept 19) 1970.

Human milk cells have been studied by means of electron microscopy, histochemistry, cell culture, and autoradiography. Mature milk principally contains sloughed off epithelial cells; in addition, histocytes, which can store large quantities of lipid inclusions (cells with foamy cytoplasm) and granulocytes (polymorphs, eosinophils) occur. Polymorphonuclear leukocytes, which were observed at various stages of fatty degeneration, can always be identified by their strong naphthol-AS-D-chloroacetate-esterase activity. Eosinophils were only detected at electron miscroscope level by their typical inclusions. Monocytes show up clearly in Pappenheim preparations, while lymphocytes are best demonstrated by cell culture with addition of phytohemagglutinin. Under the condition of mastitis great numbers of polymorphs and bacterial counts of over 1 million/ml are to be found. The percentage of granulocytes is about 90 (2% to 14% in normal milk, 45% to 85% in colostrum milk). The mean cellular content, which in 74% of healthy women is below 4,000 and never exceeds 10,000/cu mm, is greatly increased.



THE NEBRASKA STATE MEDICAL JOURNAL

STATISTICS ABUSE

We need a law to deal with statistics abuse; this can be as bad as drug abuse or child abuse. For instance, it may be possible that mother's milk is a precursor to the use of marijuana, for one is often followed by the other. It would be interesting to know how many pot smokers were raised on mother's milk; I might get a government grant and look into this, but it's probably been done.

By counting the diminishing number of people in the average automobile on the highway and then extrapolating, it seems obvious that in ten years, automobiles racing down the interstate will have nobody in them.

A similar observation was made regarding the sales of TV sets when they were new. Extrapolation was responsible again; this is a particularly vicious form of statistics abuse. And it showed that there would soon be more TV sets than people. Maybe it was more than bathtubs, and that is probably so today.

The story of the statistician who drowned in a pool where the water was only five feet deep on the average is a good example of statistics abuse; it was ten feet deep at the end where he met his end. And the man with his head in the refrigerator and his feet in the oven, or the other way around, felt comfortable on the average, statistics abusers will happily tell you.

Drugs, children, and statistics are abused by people who do not understand them.

—F.C.

THIRTY DOCTORS

If a man is good at one thing, Carlyle said, he will be good at everything. Here are thirty physicians who distinguished themselves in nonmedical pursuits and who became famous. I do not know how good they were in medical practice. Conan Doyle's office was not crowded and Doctor Watson's practice was as small as his author's; we might otherwise not read of the Red-headed League or of the dog that did not bark.

Most of these need no explaining: many wrote, one broke the four-minute mile for the first time, some were active in affairs of state, and one was a queen. Here is my own list. I call your attention to Copernicus, Elisabeth, Roget, and Schnitzler. You will find your own favorites.

Ballay: politics. He was governor of French Guinea and of the Sengalese territories.

Bannister: sports; the four-minute mile.

Berzelius: chemistry. He invented the modern system of writing chemical symbols and formulas.

Copernicus: astronomy. He introduced the heliocentric theory: the sun doesn't go around the earth, the earth goes around the sun.

Chekhov: literature.

Cronin: literature.

Dodoens: botany.

Doyle: literature.

Duvalhier: politics.

Elisabeth: Queen of Belgium.

Fracastorius: physics. He was the first to refer to the magnetic poles of the earth.

Goldsmith: literature.

Grenfell: missionary.

Helmholtz: physics. He wrote "On the conservation of force."

Keats: literature.

Maugham: literature; "Of human bondage," "Rain," and all those others.

daOrta: botany.

Paloma: politics; Minister of State.

Rabelais: literature.

Rivet: anthropology, professor.

Roget: writing. He wrote the "Thesaurus."

Robles: politics. He was a member of the

Guatemalan legation in Paris, and was Deputy of the Guatemalan Congress.

Roldan: Secretary of Education.

Schnitzler: literature.

Schweitzer: organist, theologian.

Slaughter: writing.

Unanue: Prime Minister.

Vianna: agriculture.

Virchow: politics. He was a representative in the German Reichstag, Prussian Diet, and Berlin Council.

Zamenhof: communication. He invented Esperanto.

I like Roget and Grenfell, Zamenhof and Elisabeth. I have read and reread all of the exploits of Sherlock Holmes. Berzelius, Copernicus, Maugham, Keats, and Chekov make us proud. You may like Rabelais and you may wonder at Duvalhier; Virchow and Elisabeth may surprise you. Thirty's a good number.

—F.C.

LOOK AT BOTH SIDES

The patient asked why his knee hurt and the doctor said "You're 80 years old, you know." So the patient said "Well, the other knee is 80 years old, too."

A man sustains an injury to his right elbow when he is 25, and when he is 50, the radiologist finds minimal arthritic changes there. Is this traumatic arthritis or is it age? Surely, at 50, slight changes may be anticipated in all of us; it is not reasonable to expect our ankles and elbows and knees to look as good in our fifties as they did when we were 20.

The solution to this problem is easy.

X-ray the other side.

Osteoarthritic changes on the injured side mean it's traumatic arthritis. But if the elbows look the same, it's age.

—F.C.

Alternate-Day vs. Shorter-Interval Steroid Administration — J. Walton, B. S. Watson, and R. L. Ney (Univ of North Carolina School of Medicine, Chapel Hill 27514). Arch Intern Med 126:601-607 1970.

Identical pharmacological amounts of synthetic adrenal steroids were given on alternate days and at eight-hour intervals to nine adult subjects. The effects of the two regimens on serum and urine sodium, potassium, calcium, glucose, and urine nitrogen levels, and creatinine clearance were monitored. During short-interval steroid administration daily urine nitrogen, potassium, calcium, and glucose levels were significantly increased ($P<0.05$). Only urine calcium and glucose levels were significantly increased during the alternate-day regimen. Additional studies demonstrated that the effects of the alternate-day dose on fasting serum glucose were dissipated before the next scheduled dose. This was not true with the shorter interval dose. These data suggest that the undesirable catabolic effects of glucocorticoids do occur with alternate-day administration but may be less severe than when the steroid is given frequently in divided doses.

Copper - Induced Acute Hemolytic Anemia: New Complication of Hemodialysis—A. D. Manzler and A. W. Schreiner (Univ of Cincinnati School of Medicine, Cincinnati 45202). Ann Intern Med 73:409-412 (Sept) 1970.

Three episodes of copper-induced acute hemolysis after hemodialysis in two patients, and two uneventful exposures to copper in a third patient, are reported. The clinical syndrome of copper intoxication is described. Contaminated dialysis was caused by copper that was released from copper tubing in the dialysate-making equipment when a deionizing system was exhausted, allowing acid water to be delivered to the dialysate-making equipment. Dialysate and plasma copper levels are correlated with symptoms and hemolysis. Corrections have been made to eliminate this potentially lethal complication of hemodialysis.

Sickle Cell Anemia with Thrombosis and Gangrene in All Four Extremities — A Case Presentation

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and
THEODORE R. PFUNDT, M.D.*

SINCE 1910, when Herrick first described sickle cell anemia, and reported the peculiar shaped red corpuscle,[1] the etiology and complications of this entity have been further delineated and described. It is now known that changes in the aminoacid constituents of polypeptide chains are responsible for the abnormal hemoglobin S found in those individuals who either carry the trait or have the disease.[2] Recurrent hemolytic crises, painful hand and foot swelling, trophic skin changes and thrombotic processes involving various organs are relatively common findings in sickle cell disease and particularly in chronic cases.[3]

In the following case, an eighteen month old colored male is presented who developed peripheral gangrene involving all four extremities following application of ice cold packs during a febrile episode.

Case Report

This eighteen month old colored male was admitted to Childrens Memorial Hospital because of fever, abdominal pain, and vomiting for two days prior to admission. At one year of age, when the patient was hospitalized because of pneumococcal meningitis, hemoglobin electrophoresis demonstrated the S-S pattern of sickle cell disease. Physical examination revealed irritability, upper respiratory infection, meningismus, temperature 104.5°, respirations 60/m, heart rate 160/m, body weight 22 lbs, and height 32 inches. The left hand and both feet appeared to be moderately puffy, but no trophic changes were noted.

Marked hypochromia and sickling were seen in the peripheral blood smear. Hemoglobin was 7.8 grams per 100 ml, hematocrit 24 percent, red blood cells 3.04 million cu mm, and reticulocytes 3 percent. Total white blood count 41,800/cu mm, with marked shift to the left, and the urinalysis was normal.

Spinal fluid was clear with normal cytology and chemistry, and showed no bacterial growth. Serum electrolytes were within normal range, serum for cryoglobulins negative, and serology negative. Serum bilirubin was 3 mg percent, and the serum proteins were 6.2 grams percent with normal albumin: globulin ratio.

Chest x-ray showed moderate cardiomegaly, and the electrocardiogram was reported as normal. Upon admission, and following the spinal tap, the patient was sponged with ice-cold water intermittently to control the temperature, and was started on antibiotics. The following day the temperature continued to be elevated, tachycardia persisted, and the patient's fingernails became cyanotic. Intravenous fluids and digitalis were started and a transfusion of 200 ml of whole blood was given. Ice packs were continued p.r.n.

By the third hospital day, the hands were very blue and cold; and the toes, ankles, and lower aspects of both legs were bluish-black in color. These changes were associated with considerable edema. At this point, anticoagulant therapy was instituted, with concommitant administration of prescoline hydrochloride.

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Prothrombin time was 15 seconds at the beginning of anticoagulant therapy, 87 percent of normal control. Bleeding time was ½ min, and clotting time was 2 minutes. A 100 percent prolongation of these time values was obtained with anticoagulant therapy after 3 days, at which time it was discontinued. By the fifth hospital day, a larger vesicle appeared on the sole of the left foot, the finger tips of both hands became white in color, and gradual sloughing of fingers of the left hand was noted. On the 17th hospital day, spontaneous amputation of the left ring and right fourth finger occurred. Blood culture obtained at this time showed no growth in 3 weeks. X-ray films of the involved extremities showed extensive excavation of the metaphyseal ends of the tibia, fibula, radius, and ulna.

Demarcation and spontaneous loss of left small toe occurred on the 31st hospital day, and surgical amputation of four right necrotic toes with their respective metatarsal heads was performed shortly afterwards. The patient then improved, and he was dismissed in satisfactory condition.

Discussion:

Cooling is associated with reflex vasoconstriction and subsequent decrease of blood flow to the tissues involved, decreased oxygen tension, and hemoglobin saturation.[4] Accumulation of metabolites is also increased under those circumstances and results in lowering of local tissue pH. In individuals with sickle cell disease, low oxygen tension and low tissue pH produce tactoid formation of S-S hemoglobin, and therefore sickling occurs.[5] It has also been demonstrated that the viscosity of S-S hemoglobin blood increases by almost 100 percent under low oxygen pressure, and undoubtedly this is an important factor in the pathogenesis of sickle cell disease.[6]

Venous blood temperature in lower extremities is normally lower than temperature measured in the upper arm,[7] and certainly further decrease of local temperature initiates or accelerates the vicious cycle characterized by increased blood viscosity, erythrostasis and sickling, thrombotic processes, trophic changes, ulcers, and peripheral gangrene, as it was observed in this case.

Application of ice packs is a common procedure for rapid symptomatic control of high temperature. However, caution must be exercised before subjecting a child with sickle cell disease to drastic cooling of extremities.

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Drug Problems on the National Scene And Corrective Measures*

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PUBLIC interest and concern marks the problems of drug abuse and addiction as contemporary America's most visible health issue. From the "hot copy" of the nation's press to a proliferation of scientific articles, the varying aspects of the problem are becoming rapidly documented. One recent survey of the literature exceeds 300 references on glue sniffing alone. Yet astonishingly little is known of the problem itself — that is, the individuals and groups who abuse or become dependent on chemicals.

While patterns and practices are readily identified, the underlying meanings and motives remain obscure. As an inner city ghetto phenomenon, heroin addiction was explainable as a result of blocked opportunity and personal hopelessness, but now it is becoming the drug of choice of many affluent suburban youths.

It could be projected that the high school teenager would emulate the drug experimentation of the older college student but not that it would so quickly descend to junior high and grammar school children. Yet generation gaps have narrowed with different age and sociocultural groups evolving their own novel styles of drug-taking rituals and associated activities. Therefore, the focus of this paper will be on the problem as it occurs in a group or social context, as this characterizes the drug problem behavior of teenagers and young adults.

Until recently, education-prevention programs were based on such discrepant facts that youth either recoiled in rebellion or laughed at the ludicrous position of adult society. The "pot" versus "booze" controversy produced the rationale, even from international authorities, that "two wrongs don't make a right." Some educators are modifying their position suggesting that marijuana be best understood by labeling it an "intoxicant with effects and manifestations similar to alcohol." Will youth accept such logic as they observe the free flowing aggression of the booze party, or the statistical count of highway deaths caused by drunken driving?

Early intervention efforts have often found youth not only unwilling to accept proffered solutions, but rejecting our definition of the problem as well.

Medicine and allied professions in particular, until the last several years opted out except for a few individuals with sufficient temerity to risk new means of confronting the problem. Even so, many attempts to offer help have met with indifference or resistance by the drug-abusing population. Examples include: the mental health clinic which modifies its policies to offer outpatient treatment for narcotic addicts, but none appear to receive the traditional 50 minute hour psychotherapy; a psychiatric hospital opens its doors to a nearby hippie enclave, but is avoided by the inhabitants except for use as a "crash pad;" or, the experience of urban health officials to set up a clinic to administer a narcotic substitute who receive an avalanche of protests from the residents who interpreted their action as the establishment wanting to control poor people by keeping them "hooked on their dope."

The media's potential for compounding or diminishing the problem has been reviewed in depth. Inaccurate scare headlines result in later rejection of factual information. Caution might also be exercised in attributing reduced incidence of use of a particular drug to adverse effects publicity. A case in point would be the lessening of LSD use following disclosure of possible chromosomal damage and birth defect correlates. While this no doubt halted many would-be and habitual users, at the same time a hippie on the street would talk of getting "burned" with bad acid and the chance of a "bummer" as reason for avoidance.

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*Prepared for the 102nd Annual Session of the Nebraska State Medical Association, April 29, 1970, Omaha, Nebraska.

Another factor to be considered is the changing nature of the drug scene, so that with the exception of marijuana, there would be an expectation that new substances would be sought, and others abandoned. At about this same time, the acid scene of many hippie communities became a speed scene — oral ingestion gave way to shooting it in the veins. "Speed Kills" and "Crank Cripples," backed by evidence of physical depletion and paranoid thinking, may likewise deter many potential "meth heads," yet in these same mini-societies, heroin use begins to flourish. Our capacity to influence such behavior is hopeful but still in a primitive state of development.

Fortunately, we are now passing through the public's "gasp-of-disbelief" response to headlines proclaiming that 50 or 60 or even 70 or 80 percent of a high school class uses drugs. This sort of loose overstatement has sometimes produced a community "overkill" reaction, followed by paradoxical effects.

Poorly designed or crudely interpreted surveys frequently have not differentiated between a peer-group induced solitary marijuana experience and regular abuse of more dangerous substances. Conversely, later, more responsible studies usually show markedly lower percentages of serious experimentation or regular abuse. The resultant relief to parents and teachers that, perhaps only 10 or 15 percent of high school students have serious abuse problems induces a lull of complacency masking its alarming numerical significance.

Due to the shifting, changing nature of the drug scene, or more accurately, drug scenes, anything less than crude estimates of prevalence or extent has been almost impossible. Because of law enforcement monitoring, the most accurate figures are available for narcotic addiction.

The last authoritative figures supplied to the Bureau of Narcotics and Dangerous Drugs by law enforcement agencies place the number of known addicts in late 1968 at 64,000. The National Institute of Mental Health provides an up-to-date estimate of between 100,000 and 110,000. It is interesting to compare these figures with those recently offered by mental health administrators responsible for drug abuse programs in Chicago, San Juan, Baltimore, and Washington, D.C. Their combined estimate exceeds 43,000. It is considered that there are seven or eight other U.S. cities that have addict populations of comparable size.

New York City has for some time been judged to contain one half of the country's addicts. A physician program director arrives at a figure of 100,000 based on a probable one percent death rate from overdose. For the city as a whole, there were 224 teen-age deaths from overdose in 1969.

The major trend of increasing use of narcotics by younger age groups parallels that of non-narcotic abuse. This is supported by arrest records (California data shows a drop in average age from 30 in 1950 to 19 in 1968), and surveys comparing college and high school drug using practices (1969 BNDD compilation of surveys and studies) which depicts high school students as having an overall greater incidence of drug abuse than college students.

Dependence on non-narcotic drugs is estimated by the NIMH to affect between 200,000 and 400,000 persons. Time magazine in its September 1969 special issue on "Drugs and the Young" suggests the number of narcotic addicts at 100,000, but the number heavily dependent on other drugs as somewhat less than 2,000,000.

There is general agreement that the trend is toward multiple drug abuse. Whereas in the past, the addict tended to use a single drug, increasingly, an array of substances are used in tandem, collectively or during phases of an abuse career. This development, particularly among the young, makes it difficult to apply the World Health Organization's seven type classification system of drug dependence.

Corrective Measures

While problems of narcotic addiction and drug abuse have literally exploded throughout the country, national, state and local efforts to cope with the problem have likewise accelerated.

On the federal level, the milestone legislation was the Narcotic Addict Rehabilitation Act of 1966. Essentially, this law gave recognition to the premise that addiction to narcotics was not in itself criminal behavior, and that treatment and rehabilitation rather than punishment was to be provided. Three provisions of the act pertained to civil commitment for inpatient care, followed by continued supervision and treatment in the community through contracts with local agencies. Except for Title II of the act (administered by the Justice Department), covering commitment for treatment of addicts convicted of a federal crime, the program is administered by the NIMH.

The long range intent to establish community-based programs throughout the United States was commenced under Title IV of NARA with the funding of six centers in 1968. As part of a strategy to bring medicine into the treatment of addiction, five of the six grants were made to medical school - based community mental health centers. In 1969, this part of the law was superseded by an amendment to the Community Mental Health Centers Act, and staffing grants were made to ten additional centers.

When fully operational, these 16 centers will have a capacity to treat more than 8,000 persons. Currently applications are being reviewed with the intent of funding 10 to 15 additional centers. A new amendment lengthens the grant duration from 51 months to eight years. For poverty areas, preferential support provides 90% of staffing costs for the first two years, decreasing to 70 percent for the last three years.

The intent of the program is to demonstrate effective means of intervention and treatment; provide training to meet critical manpower shortage needs; furnish consultation to communities; and give leadership to education aimed at prevention of drug experimentation, abuse, and addiction in school age youth. All centers cooperate with national data collection bank which will supply information of characteristics and patterns of narcotic addiction and the response to a variety of treatment modalities of this enigmatic population.

Fourteen of the sixteen centers carry on methadone maintenance programs within the framework of an investigative procedure. Requirements include urine monitoring, daily supply under a nurse's supervision in a fruit juice vehicle and other accepted safeguards. One abstinence program reports that nearly 50 percent of those seeking admission, leave when they find that methadone is not available.

Based on 18 months experience, another facility found that approximately 80 percent of admissions requested methadone treatment, 60 percent of this group remained in treatment on methadone, 20 percent requesting withdrawal into another part of the program, with the remaining 20 percent dropping out of treatment. Of the original 20 percent of patients who elected abstinence program, the retention rate dropped to 40 percent after one year. It should be pointed out that this center primarily serves a hard core population of career addicts.

A center serving a mixed population of addicts found only 25 of 170 suitable for methadone maintenance. The majority were assessed as mixed drug users, or for those using heroin it was felt that their low-grade habit had produced a psychological dependence. Methadone was not provided, so as to avoid the possibility of introducing physiological addiction.

The centers have also demonstrated that full hospitalization is rarely needed during the withdrawal phase, and ordinarily takes place within the therapeutic community residential setting. Most heroin habits seen do not manifest the classical abstinence syndrome. The probable explanation relates to the generally poor grade of street heroin available which is usually cut to three or four percent. In certain port cities and border communities, this may not be the case, where purity up to 40 percent has been tested. Content variance in other cities is felt to be a major factor in deaths from overdose.

All centers use versions of the therapeutic community approach. The majority follow the Daytop-Synanon confrontation model with vigorous gut-level attacks on the addict life-style balanced by various humanistic supportive techniques.

There is constant in-group pressure for the new resident to undergo an image change, aimed at extinguishing "dope fiend" thinking and behavior. Fundamental is the increasing acceptance of responsibility by the resident primarily achieved through peer-group pressure and reward. Such strategies have enabled hospital and other facilities throughout the country to achieve an environment free of drug traffic without physical security measures.

All centers employ trained ex-addicts, many of whom have progressed to major program leadership positions. One university sponsored facility has a staff comprised of 50 percent trained ex-addicts.

In addition to basic hospital and residential services, store front operations, halfway houses, hot lines, rap centers, and 24 hour crisis teams are typically a part of a comprehensive program. In an effort to provide the full range of required services, all centers have developed affiliates. Thus, a college of medicine in an urban model city area can develop a partnership with nonprofessionals operating self-help crisis and residential resources. In this way, the university becomes relevant and connected directly to the poverty area and its residents. Consumer participation and neighborhood involvement enhance the delivery of human services.

Vocational training is seen as essential. The slogan of many programs follows the theme that the cure for drug addiction is a meaningful life. This sets the stage for many education-prevention efforts in which professionals and rehabilitated addicts work with schools and communities to educate adults and change attitudes of children and teen-agers toward drug abuse.

Generally avoided in contact with youth is the professional assuming the role of expert or the ex-addict "tell it like it is" approach. The vital message is to demonstrate how professionals and former addicts can work together to understand and cope with the problem and thus prepare students, parents, teachers and school administrators to communicate on a horizontal level and do likewise. That is, join together both to define the problem and to work toward meaningful solutions.

Education and Training

Last month, a major expansion in drug education, information and training was announced by President Nixon. The target groups for benefits are to be children and youth. The major goal is prevention. The methods are teacher training programs, the establishment of a National Clearinghouse for Drug Abuse Information, publication of a book pooling the knowledge of all federal agencies, and an expanded mass media education campaign.

Two cases dramatizing the announcement were addicted twelve year old boys, one of whom died from an overdose of heroin.

Teacher Training

Past efforts at drug abuse education in the classroom have generally been painful for textbook prepared teachers and met with little enthusiasm by incredulous students. An intensive summer course to train 300 persons, sent in teams from states throughout the country, will offer the latest information available, intensive instruction in innovative teaching techniques, understanding of the youth culture and opportunities to explore one's own attitude toward drug abuse.

Administered by the Office of Education of HEW, four or five university based, regional centers will train these teams of community leaders, teachers, students and school administrators. The "multiplication" approach will then send out these trained teams to tour their home state and lead workshops to reach 150,000 teachers and 75,000 students and community leaders. This force will thus be equipped to present the facts for a drug education program to every school district in the country. A series of regional conferences will be held in the spring of 1971 to evaluate the effectiveness of the program.

An accompanying action will be to award grants to states on the basis of population. The amount will range from $40,000 to $210,000. A mid-April conference of all recipients developed the strategy of how programs might be carried forth. Youth was strongly represented on a peer basis with attorneys and social workers, physicians, and teachers. While each state is free to spend its money as it sees fit, it is anticipated that states will use the national summer training centers.

The Expanded Drug Abuse Prevention Advertising Effort

One year ago, the National Institute of Mental Health, with the endorsement of the Advertising Council, Inc., launched an all-media campaign advertising the dangers of drug abuse. The public-at-large, as well as special target groups, were educated through radio and television spot announcements, newspaper and magazine ads, posters, billboards, and transit cards.

The TV series looked at the neighborhood "junkie" housewife, the so called "fat" doctors, the teenager seeking a high and the "yo-yo" effect of the up and down drugs. The four flyers, Up and Down Drugs, LSD, Marijuana, and Narcotics are among the all time sales leaders for government publications, and are being updated for continued publications. Many of the posters, such as "Slavery 1969" have reached heretofore unresponsive groups in the ghetto, while middle class suburban youth are turned on by the anti-trip psychadelic materials. In each case the consumer was the consultant in their planning and development.

This year, the President has asked the Advertising Council to make a drug abuse program one of its major campaigns of 1970. The White House itself is coordinating the effort which will launch an initial three year prevention program for elementary and junior high school children.

Relying on television, there will be short direct messages in animated cartoon form—high school and college students will be offered updated "now" materials; as will the armed forces, parents, and inner city audiences. Already produced by the National Institute of Mental Health is a dramatic but authentic film on the ghetto youth heroin problem, "A Day in the Death of Donny B."

Intensified Professional Training

With an emphasis on prevention and treatment, the Institute is establishing four areas for intensive training programs: training of professional and paraprofessionals; training of health and social service personnel; preparation of creative training aids for teachers; and development and distribution of materials for practicing health professionals. One half of the one million dollars available will fund four week intensive training courses for 720 people working in the field. The training programs will be located at four existing community drug abuse treatment centers.

The National Clearinghouse for Drug Information

The public is now provided with one central office from which it can obtain information. The Clearinghouse is collecting material from federal, state and local programs to disseminate publications throughout the nation. Maintenance of a computer data bank on a wide variety of programs will facilitate rapid and detailed information availability.

A Federal Source Book: Answers to the Most Frequently Asked Questions About Drug Abuse was a joint effort of HEW, Defense, Labor, OEO and Justice. Single copies are now available. Eventually, it will be distributed in the millions.

This year, more than half a million inquiries are expected at the Clearinghouse. It is anticipated that over five million free pamphlets will be distributed and stimulate the bulk sale from the Government Printing Office of millions more.

Accelerated Marijuana Research

To accompany the Education and Training effort, the administration will make available to the NIMH more than twice the funds of last year for marijuana research. Through contracts the Institute will make $1,000,000 available to (1) ascertain the effects of long-term use by humans; (2) determine how the substance affects driving and other skilled acts; (3) accelerate pharmacological, toxicity, and behavioral studies of both animals and humans; and (4) expansion of supplies to make readily available to competent investigators THC and various forms of marijuana.

To achieve global understanding, selected Latin-American countries, Israel, India, and Greece where hashish and marijuana has long been used, will be studied.

Conclusion

This review of present efforts on the federal level to confront drug abuse problems indicates its national priority. It is obvious, however, that the effectiveness of the campaign will only be determined in local communities.

Treatment of Hypertension*

HARRIET P. DUSTAN, M.D.†

HYPERTENSION shortens life. Even the so-called benign hypertension causes premature death or disability and can scarcely be looked upon as benign. Considering that hypertension is potentially lethal, the question arises as to whether sustained reduction of arterial pressure prolongs life. There are two answers to this question: an unqualified "yes" and a "maybe," depending on whether reference is made to the complications of arteriolar disease or those of atherosclerosis. The most frequent results of hypertensive vascular disease — the term used for the arteriolar disease — are cardiac failure and malignant hypertension. In both instances blood pressure reduction is life-saving providing, of course, that in the malignant hypertensive renal function is still adequate to sustain life. Clinical experience also indicates that good blood pressure control in hypertensive patients without these complications will prevent their occurrence. In contrast, the effects of antihypertensive treatment on the complications of atherosclerosis are not so clear as on those of hypertensive vascular disease, and here the "maybe" answer has to be given. The equivocation in this answer comes because antihypertensive drug treatment has not been used over a long enough period of time to assess its effects on the complications of atherosclerosis that so frequently accompany hypertension. However, there is some evidence which suggests that strokes, at least, occur less frequently in treated patients.

From the foregoing, the goals of antihypertensive treatment can be stated as: (1) to reduce arterial pressure to normal or as near normal as possible, (2) to prevent the progression of arteriolar disease and control its complications if they are present, and (3) to prevent the development of premature atherosclerosis — or at least to prevent or postpone the development of its complications.

There are a variety of ways to treat hypertension effectively. Some are specific in that they eliminate or block a pressor mechanism and thus reduce arterial pressure to normal. Others can be called non-specific because, although hypertension is greatly lessened, arterial pressure does not become normal. The treatments which in my opinion are specific are both surgical and medical. In a young patient with renal arterial stenosis, a successful operation — either a revascularization procedure or nephrectomy — usually completely eliminates the hypertension. In a substantial number of patients with pheochromocytoma, primary aldosteronism and coarctation of the aorta similar results are achieved by operative treatment. Certain drug treatments also achieve complete normalization of arterial pressure. Thus, in patients with primary aldosteronism, administration of spironolactone often eliminates hypertension as surely as does operative removal of the tumor; and in patients with increased activity of the beta-adrenergic component of the sympathetic nervous system, use of a beta-blocking drug such as propranolol not only abolishes the symptoms but also reduces arterial pressure to completely normal levels.

The experience with these "specific" treatments is striking because such results are usually not achieved when the pressor mechanism is not approached directly. For example, contrast the blood pressure reduction achievable by successful operative treatment in a patient with renovascular hypertension with the result produced in the same patient by a drug, like alpha methyl dopa, that suppresses sympathetic vasomotor activity. In the former instance, the operation eliminates the pressor factor(s), while in the latter drug treatment lessens the hypertension but does not eliminate it. The operative treatment is specific, while the drug treatment is nonspecific or empiric.

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*Prepared by the Nebraska Heart Association for this Journal.

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The fact that most drug treatment of hypertension is empiric is not to say that it is unsuccessful, because substantial reductions in arterial pressure can usually be achieved. There are a number of drugs available which are effective and, for the most part, reasonably easy to take. Two types are most commonly used — oral diuretics and drugs that suppress the activity of the sympathetic nervous system through effects on production, storage or release of the neurotransmitter, norepinephrine. The former group includes chlorothiazide and its derivatives, as well as ethacrynic acid and triamterene; the latter comprise ganglion-blocking drugs, reserpine, guanethidine, alpha methyl dopa and pargyline. Not included in these two groups is hydralazine, which seems to act directly on the arterial wall. The anti-aldosterone drug, spironolactone, has value as nonspecific treatment when used to combat the potassium losing effects of chlorothiazide diuretics.

When used in adequate doses, these drugs usually achieve good blood pressure control. When more than one drug is used, combination tablets are not the best way to administer the medication because there is need to individualize the dose of each drug. The most frequent combination of drugs is an oral diuretic with another type because usually there is a synergistic effect on blood pressure reduction — the combination achieving a better result than would be expected from purely additive effects of the two drugs. Not more than one type of chlorothiazide diuretic should be given in a treatment regimen, and, also, there is no evidence that giving more than one type of adrenergic-blocking drug — such as combining guanethidine with methyl dopa — adds any benefit.

When it is necessary to reduce blood pressure rapidly, as in patients with cardiac failure, intracerebral bleeding or hypertensive encephalopathy, good results can usually be achieved by the potent peripherally-acting sodium nitroprusside or diazoxide given intravenously. More readily available, but less potent, are preparations of reserpine, hydralazine, methyl dopa, and ganglion-blocking drugs suitable for parenteral administration.

One crucial question in the long-term treatment of hypertension concerns how to judge the effect of treatment. Actually, use of office pressure measurements is usually unsatisfactory, but for certain patients there is no other way. However, many patients can learn to make their own measurements, and this provides a daily record of responses and allows for judicious adjustment of doses whenever indicated. One mistake that many clinicians make is failure to obtain a good pre-treatment arterial pressure record, and this difficulty can be obviated by use of home readings. The technique is easy to learn, and the measurement is no more difficult to carry out than estimation of urinary sugar — information considered a must in the treatment of diabetes.

With home readings, the physician has the advantage of judging the effects of treatment in two situations rather than one because he additionally obtains office readings when the patient visits him. The more detailed record of treatment response that is available the better can the treatment be managed.

In some patients with hypertension of unknown cause, use of nonspecific drug treatments detailed above reduces arterial pressure to normal just as specific treatments do in patients with known types of hypertension. Such responses show that each type of treatment can be specific when properly chosen; the current problem is that, for the most part, there is no sure way to make the proper choice. Currently, the challenge of investigation is to learn enough about the mechanisms of hypertension and how they are interrelated so that specific, rather than empiric, treatments can be given to each hypertensive patient.

Past, Present, and Future of Surgery And the Conquest of Cancer

PART II

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The Relationship of Viruses to the Etiologic Agent of Cancer in Man

Although we have good evidence that viruses are the cause of several malignant diseases of the leukemia type in animals, we have no proof that a virus can cause malignant disease in man. There may be one exception to this insofar as a British scientist, Dr. Dennis Burkitt, has isolated a virus (known as the Epstein-Barr virus) from cells of African children suffering from a type of lymphoma or sarcoma encountered primarily in Africa.

Later, Grace and co-workers[11] of Buffalo looked for the virus in healthy volunteers and cancer patients, finding antibodies to that virus in 99% of their volunteers and in high amounts in 98% of patients with leukemia, lymphomas, Hodgkin's disease, and other cancers. Virologists Werner and Gertrude Henle[12] of the University of Pennsylvania have contributed further to the possible relationship of the E.B. virus to malignant disease in man by finding the virus in patients with infectious mononucleosis; many virologists believe that the E.B. virus causes that disease. Speaking at the recent Virology Seminar in New Orleans, Grace[11] suggested that infectious mononucleosis may be a self-limiting form of leukemia, and believes that mononucleosis may actually confer an immunity to leukemia. His belief is supported by the fact that a leukemia patient injected with the virus developed mononucleosis and sustained a temporary remission from his leukemia. Other causes of remission of leukemia associated with development of mononucleosis have been reported, but the evidence of this relationship still remains circumstantial, because remission from leukemia is not extremely uncommon.

Numerous investigators have presented evidence that viruses might be implicated in the causation of human cancer. Wendell Stanley[1] has been a persistent advocate that they are. Dmochowski[13] has recorded numerous observations which represent evidence for a viral etiology. He has observed viral particles on numerous occasions in patients with acute leukemia. He also noted "that morphologically the virus particles appear similar in all types of leukemia in which they have been encountered." More recently, he and associates have reported finding virus-like particles in many breast biopsies, but stated, "Morphological similarity does not indicate biological identity."

Cancer Antigens and Antibodies in the Human Being

So many successful reports have been published on the prevention of malignant disease (usually leukemia) in animals that it is obvious that attempts should be made to utilize similar principles in the human being. One of the major stumbling blocks has been the inability to use the human being in an experimental fashion.

However, attempts are being made to produce antibodies for treatment of human cancer. One of the most encouraging of these reports is that of Humphrey and associates.[14] Patients were given weekly injections of a frozen and thawed tumor homogenate; following immunization, blood was drawn, and the serum used in tumor cell cultures. Primary human tumor cell cultures were prepared using preimmune, immune or control sera with tumor cell suspension. Cytotoxic effect was determined after 24 and 48 hour incubation. Of 34 patients immunized with tumor homogenate, only 15% had cytotoxic sera, but after immunization, sera from 67.6% of 34 patients were cytotoxic. Cross immunization was carried out between 14 pairs of patients.

Three patients with disseminated malignant melanoma and 2 patients with disseminated cancer of the colon showed favorable response to the therapy.

Moore and Gerver[15] have cultured lymphocytes, and given them in huge quantities to 13 patients with advanced malignancies. Two of these patients showed regression of their tumor after receiving over 300 grams of cultured lymphocytes. A third patient with an extensive malignant melanoma showed so much regression that the lesion could be excised locally. The patient has been infused weekly with 15 to 40 billion lymphocytes and has had no evidence of recurrence (4 months) up to date of publication.

The demonstration of antibodies against human malignant melanoma by immunofluorescence[16] represents data supporting the possibility of development of effective therapy.

Numerous other workers have presented evidence that antibodies to cancer can be produced by the human being. Utilizing the complement fixation test Graham and Graham[17] found that 25% of 48 patients with cancer in numerous organs had circulating antibodies against their own tumor. One of the most dramatic of all experiments demonstrating the existence of antibodies or their formation is that reported by Southam and associates.[18] They made homologous transplants of cancer cell lines into patients with cancer, and young people having no cancer. The young people possessed antibodies or equivalent biological substances which prevented the growth of the inoculated cell lines whereas the inoculated cells survived in many of the patients with cancer.

One of the most promising of the new contributions in cancer has been the identification by Gold[19] of an antigen which behaves very much like an antigen derived from fetal gastrointestinal tract. This antigen obtained from patients with colon cancer is different from that found in people with other types of cancer. It is found in a very high percentage of people with cancer of the colon, and it may prove to be a fairly accurate test for cancer of the intestinal tract, especially the colon.

What Advances Can We Expect From Surgery in the Future?

It has been shown from previous evidence that many medical discoveries will add to the surgeon's work; whereas, other discoveries will subtract from it.

Numerous *ancillary mechanisms of therapy* may lead to a *cure for certain types of cancer* and thus eliminate the necessity of surgery. These possibilities include chemotherapy, antibodies, and advanced forms of irradiation.

We already know that x-ray treatment can cure certain types of cancer. We will probably have to have the discovery of another type of ray before radiation therapy for curable cancers can be extended appreciably.

Chemotherapy has resulted in the cure of one cancer, namely methotrexate for choriocarcinoma. Surely we can expect other cancers to succumb to chemotherapeutic agents, but we may have to wait for the development of other types of drugs, although we realize the combination of certain drugs, and the adjuvant use of drugs and other modalities may be effective in improving the 5-year survival rate markedly; an example of this extreme benefit is the combination of surgery, radiation, and adjuvant chemotherapy for Wilm's tumor with a doubling of the 5-year survival rate. We now know that the various cancers are so different that we may never expect one agent to cure all cancers, but there appears to be little doubt that during the next few decades a few more cancers will be conquered by chemotherapy alone.

Since *antibodies for human cancer* have not been used for more than 10 or 15 years and even then only sporadically, we can truly say that phase of therapy is in its infancy. We grant there are innumerable immunologic mechanisms which are available for trial, and many many more will become available, as the science of immunology advances. Therefore we have good reason to be optimistic about the future prospects of this form of therapy. There appears to be no question that this form of therapy will be effective in some cancers. The only question is when.

Transplantation of organs has received extensive trial during the past 5 or 10 years. Since kidney transplantation is successful in 75 to 80% of cases, we can truthfully say that procedure is justifiable, and worthy of continued usage, providing it is done by a team with experience.

Transplantation of the heart and liver is not on such secure footing. Other than performance of an occasional operation for transplantation of these organs under ideal circumstances, there does not appear to be justification for continuing these transplantations until better drugs become available to neutralize the rejection phenomenon. Since we already have drugs which exert moderate action of this type, we can expect improvement to develop. It appears to be only a matter of time until sufficient improvement of this type will take place to allow transplantation of these organs to be performed on a routine basis by experienced teams. When the rejection phenomenon comes under control, transplantation can be extended to practically all organs of the body except perhaps the brain.

Open heart surgery has increased the types of cardiac lesions (especially congenital anomalies) amenable to surgery. These amenable lesions will obviously increase. As the causes of congenital lesions continue to be discovered (e.g. German measles, thalidamide, etc.) the number of operations required for congenital lesions will obviously decrease. However, some of the causes of congenital lesions are so complicated (and unsuspected) that they will not be known for decades or centuries.

Of the numerous advances mentioned above, the transplantation of organs is without question the most dramatic, although the cure for cancer would have to be listed as the No. 1 discovery of all time. When an effective agent to neutralize the rejection phenomenon is discovered, the transplantation of all organs will be possible, and we will have to have banks for all organs. One might ask, "Where will all of these organs come from?" Accidents such as those caused by automobiles will supply a lot, but accidents alone cannot be expected to furnish enough organs to supply the demand. We may have to find a new supply, but we can no doubt expect prophylactic measures to diminish the need for new organs, and for various reasons can expect numerous new discoveries in this field in the next several decades.

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Some Perspectives in Biomedical Engineering and Artifical Organs

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SINCE it would be unwise to make a specific program for a period longer than ten years, let us consider what may be the most probable advances in the field of biomedical engineering in the near future.

Three main fields exist, in which contributions are predictable: (A) instrument construction, (B) artificial organs or components for replacement of diseased parts of the human body, and (C) the study of the human systems for a more objective and thorough understanding of their construction and function. Progress in the first field may aid mainly the diagnosis, while in the second, treatment will be helped. Progress in systems investigations will probably help both procedures indirectly.

For illustration, a few examples will be given of what is apt to be accomplished in each group.

(A) *In the instrument field,* we are in need of a reliable device for measuring flow, especially if this could be mounted on a catheter for intravascular use. Measurement of arterial and venous pressure, without puncturing the vessel, is becoming important for the continuous monitoring in intensive care units. It should be possible to construct the proper primary sensors.

The diagnosis of atherosclerosis is another example of future possible exploration. If we can detect particles in outer space, it should be possible to detect damage in the arteries within the body. Rushmer is already busy adapting ultrasonic devices for the purpose.

A neglected diagnostic field is the one including the skin and its diseases. It is probably the most striking example of the medical profession's indifference to contemporary technology. Dermatology is still relying on eye and sense of touch to examine an organ that is so easily accessible for objective, quantitative measurement of its mechanical properties.

(B) *In the artificial organs field,* one may envision the day in which the four main systems dealing with circulating the blood and processing its ingredients, namely, the heart, the lungs, the kidneys, and the liver will be replaced en block by a single unit including a pump, an oxygenator, hemodialyzer, and a chemical processing device. Actually the first three artificial organs now available in crude form could be incorporated in one block. This would facilitate the insertion of an artificial heart and eliminate its pulmonary circulatory problems. If the four-organ system could be "fed" by processed food materials (i.e. intravenously), the digestive tract would be indirectly replaced. Since the endocrine gland function is already replaced by giving hormones, only the brain and the reproductive organs will remain irreplacable.

The combination of a hemodialyzer and an oxygenator can replace most of the functions of the placenta. The time is near that babies now suffocating with hyaline membrane disease will be sustained with an artificial placenta until their lungs recover. Examples of relatively minor projects in this field will be: the replacement of heart valves without opening the chest (by valves mounted on catheters to correct regurgitation) and closed-chest valvulotomy using small knives also mounted on catheters to correct stenosis.

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It has been demonstrated that perfusion of the coronary arteries with arterial blood improves cardiac function in animals in cardiogenic shock. A small pump implanted between the aorta and the coronary arteries might do just that.

It should be predicted, however, that organ replacement may not be physiologically successful, if the mechanical - biochemical aspect of the system's function is not better understood.

The artificial kidney, which opened the era of artificial organs, unquestionably prolongs most of the patients' lives. It does not, however, restore them to complete health and it may not do so until the function of the natural kidney is better understood and until the artificial kidney is able to remove all the substances responsible for uremia and can be applied continuously rather than intermittently.

Surgeons have said that the main difficulty in the artificial heart project is the blood material interface. One of us believes that when this problem will be solved, the patients with artificial hearts may still die of what one could call "the artificial heart syndrome," unless we learn to understand better the heart function in relation to the peripheral vascular system. The surgical and the physiological approaches to these problems are different, and they should be integrated.

These arguments should not delay progress in the construction of artificial organs. They are brought up only to indicate the necessity of simultaneous work by competent, progressive, and properly educated people in an integrated way.

(C) *As to the study of human systems,* for a more objective understanding of their construction and function, the approach to these problems by medicine should indeed imitate the logical approach that other sciences are using. The problems may be immense and a systems analysis should be the first step. To give an example, the computer analysis of the function of the human arm by the Temple University group was later used for the functional control of a prosthetic arm.

Computer analysis of a television image married to a computer-analyzed chart of the light-sensing cortex of the occipital lobe of the human brain may one day lead to an actually seeing artificial eye.

Coronary Artery Surgery— The Vein Bypass Graft

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Summary

A review is presented of four consecutive patients all of whom had three vessel coronary artery disease surgically treated by aorto-coronary reversed saphenous vein bypass grafts. Bypass grafts were combined with other procedures, aneurysmectomy and internal mammary implant, in two patients. All have been significantly improved. The vein bypass technique is described and its application as an important addition to coronary artery surgery is discussed.

Introduction

CORONARY artery disease still remains a devastating illness of our society with over one-half million persons dying annually and countless others incapacitated.[1] The introduction of selective cine coronary arteriography by Sones and associates has made it possible to determine the anatomic location and distribution of coronary occlusive lesions.[2] With accurate diagnosis and the concept of using cardiac support by cardiopulmonary bypass, there is now a great impetus to the surgical management of coronary artery disease. Myocardial revascularization techniques include the implantation of internal mammary arteries, direct endarterectomy, patch graft techniques, gas endarterectomy, excision of scarred and aneurysmal myocardium, and more recently reverse saphenous vein aorto-coronary bypass grafts. In the indirect method, as internal mammary implantation, the gains of the operation take place only after the neovascular connections between the coronary vessels and implanted vessel are established. The direct methods of revascularization have obvious advantages, but were limited in application until the advent of the vein bypass graft. The vein bypass graft appears to offer at an acceptable risk a reliable method of immediately providing oxygenated blood to the deprived myocardium for many selected patients. This technique has become a very important addition to the armamentarium of the surgeon interested in myocardial revascularization techniques. Frequently, a combination of operative techniques is necessary to obtain maximum benefit to the patient. This report summarizes our recent experience with four patients who have had aorto-coronary bypass procedures alone or in combination with other surgical techniques.

Case I

A 56-year old male was admitted to the hospital on 7-15-69 complaining of anginal pain of more than one year's duration. The patient had first suffered severe chest pain in April, 1968. Thorough evaluation at that time revealed a normal electrocardiogram, but evidence of very mild diabetes. There was some improvement on treatment with long acting nitrates and anticoagulants. After a time, the therapy seemed less successful, and by July, 1969 his angina was so severe that he was unable to continue his work as a salesman. Walking across the street, climbing a few stairs, and similar activity would bring on severe angina. His electrocardiogram remained normal. Coronary angiography on 7-17-69 revealed severe three vessel disease. There were numerous areas of narrowing of the circumflex system with 40 percent lumen occlusion. There was narrowing throughout the course of the anterior descending system, with areas of 75 percent lumen occlusion. The right coronary system revealed multiple areas of segmental narrowing, up to 90 percent lumen occlusion. Revascularization surgery was recommended to the patient at that time, but was postponed. The patient returned home and suffered a severe posterior myocardial infarction on 9-1-69. His course was complicated by cardiac arrhythmias, and following recovery he was even more incapacitated. He was confined to a largely sedentary type of existence including self-administration of oxygen for an hour three times daily. He exhibited no evidence of congestive heart failure. Surgery on 1-20-70 confirmed severe three vessel disease and diffuse spotty myocardial scarring, particularly the posterior left ventricle. Aorto-right coronary reversed saphenous vein bypass graft was accomplished with a limb from the graft also taken to the anterior descending coronary artery. (Diagram I and Photograph 1). Postoperative recovery was uncomplicated. He returned for follow-up study on 4-22-70 and at that time he was much improved. He was able to walk up to 14 blocks on the level without chest distress, and had no complaints aside from some joint aches and pains. Repeat angiography demonstrated a patent vein bypass graft.

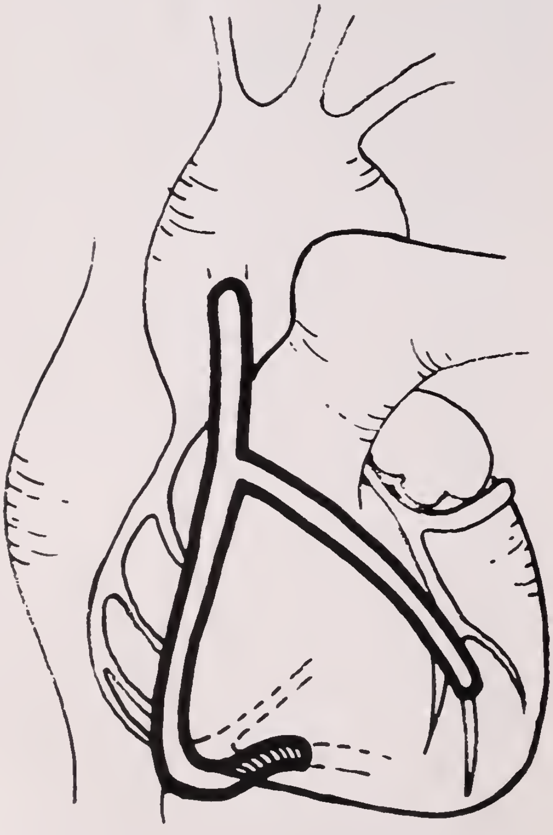


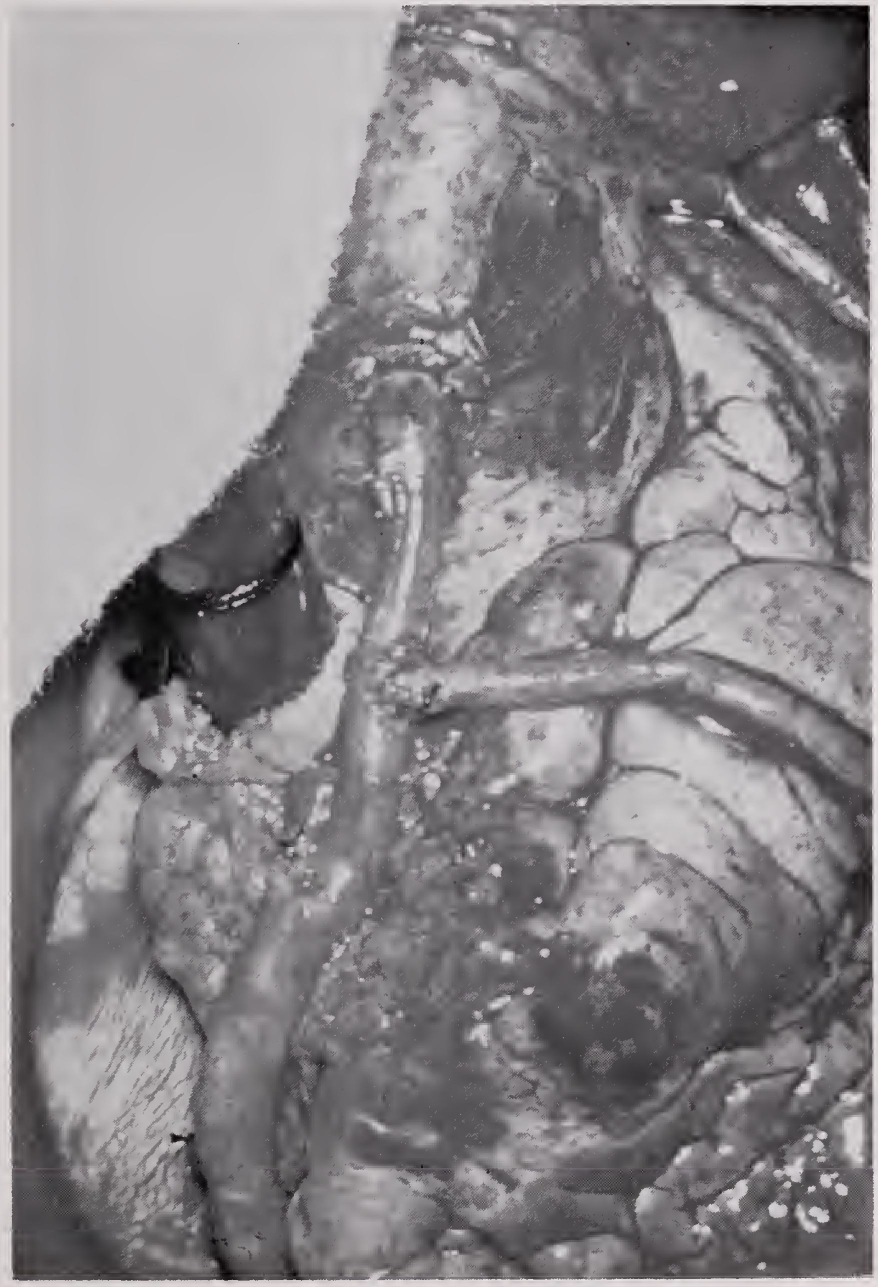
Diagram I. Aorto-coronary reversed saphenous vein bypass graft with one limb to the right coronary artery extending on to the posterior descending branch and the other limb to the anterior descending artery.

Case II

This 52-year old male was hospitalized on 1-21-70 for coronary arteriography. In May, 1969, the patient first suffered an acute myocardial infarction. His recovery was complicated by a second infarction in September, 1969, and following this the patient had been forced to restrict his activity greatly because of disabling angina. Coronary angiography on 1-22-70 demonstrated three vessel disease. There was 90 percent lumen occlusion of the circumflex. The left mainstem coronary was normal. The anterior descending artery was free of disease for the first two centimeters, and at this level an area of 70 percent stenosis was seen. Surgery on 2-1-70 confirmed disease of the proximal right coronary and moderate disease of the left system. A reversed saphenous vein bypass graft from the aorta to the distal right coronary artery was accomplished. (Diagram II and Photograph 2). Postoperative course was complicated by development of asthma from which the patient had suffered in the past, but improvement was good and the patient was discharged on 2-16-70. He returned for follow-up on 4-8-70. At this time, the patient had already experienced considerable improvement in functional capacity and was ambulatory without angina. Repeat coronary arteriography revealed patency of the coronary vein bypass graft.

Case III

A 39-year old male was first seen in February, 1970 having been referred for angina pectoris, with onset in July, 1969. A strong family history of coronary artery disease was elicited. Coronary arteriography in February, 1970 revealed three vessel disease. Sixty to 70 percent occlusive disease of the right coronary artery was noted approximately two centimeters from its origin. At another point prior to its major bifurcation there was an area of approximately 70 to 80 percent lumen occlusion. Areas of approximately 50 to 70 percent lumen occlusive disease were seen in the initial 2 to 3 centimeters of the circumflex system. There were numerous areas of minimal occlusive changes of the anterior descending artery. Surgery on 3-3-70 confirmed severe disease of the right coronary artery, continuing posteriorly down to the bifurcation of the artery. Both the circumflex and anterior descending arteries were small, and exhibited rather marked atherosclerotic disease. The anterior lateral and posterior aspect of the heart appeared



Photograph I. Operative photograph of aorto-coronary vein bypass graft demonstrating the two limbs.

ischemic. An aorto-right coronary saphenous vein bypass graft was accomplished. The left internal mammary artery was then implanted in the anterolateral aspect of the heart with several good bleeding branches left in the myocardial tunnel. (Diagram III). The patient made an uncomplicated postoperative recovery and has remained asymptomatic. The patient returned for restudy in April, 1970. The aorto-right coronary vein bypass graft was well visualized with excellent filling of the posterior descending artery.

Case IV

This 59-year old male was referred for evaluation because of angina pectoris, shortness of breath, and loss of stamina. Coronary arteriography was accomplished in March, 1970, and revealed three vessel disease. The right coronary artery had diffuse narrowing up to 70 percent occlusive in some areas. The anterior descending had areas of 60 percent narrowing complete occlusion of the main trunk just distal to the takeoff of the diagonal. The circumflex had many areas of 40 percent lumen occlusive disease. The ventriculogram revealed a markedly enlarged ventricular cavity with an aneurysm involving the apical anterior myocardium of the left ventricle. The end-diastolic pressure was elevated. On 4-15-70, the patient underwent surgery. An aneurysm involving the apical anterior aspect of the heart was found, with complete occlusion of the distal anterior descending artery and marked atherosclerotic disease of the right coronary artery. Using cardiopulmonary bypass, the ventricular aneurysm was excised and an aorto-right coronary reversed saphenous vein bypass graft was accomplished. (Diagram IV). The patient tolerated this procedure well and made an uncomplicated postoperative recovery. Follow-up angiographic study has not been obtained as yet although patient is symptomatically much improved.

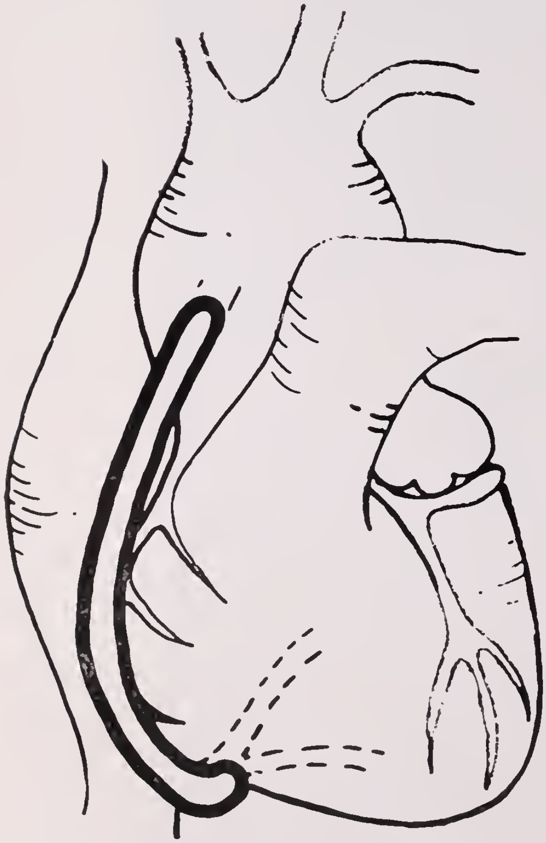
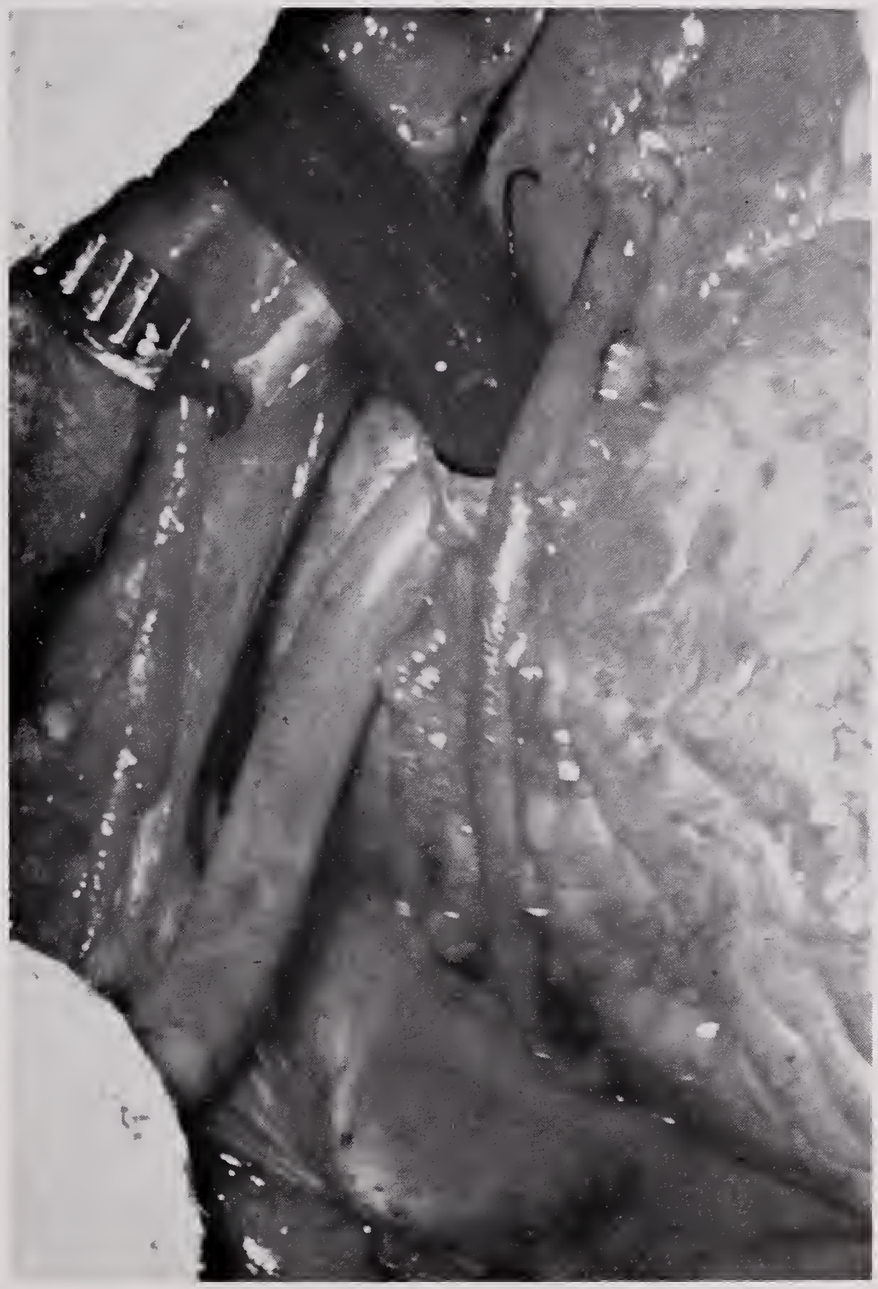


Diagram II. Aorto-coronary reversed saphenous vein bypass graft to the right coronary artery at its bifurcation.

Saphenous Vein Graft Techniques

A median sternotomy was used on all patients, and the pericardium opened in the usual fashion. Exploration and mobilization of the coronary arteries for evaluation was carried out as far as possible prior to heparinization. The patient was then heparinized and cannulation accomplished, so the patient could be placed on cardiopulmonary bypass. Cardiopulmonary bypass was instituted if either a decrease in cardiac output or excessive arrhythmias were noted. A segment of the saphenous vein was obtained from the same groin incision that was used for arterial cannulation. The vein was stripped of adventitia and prepared for graft. A hemodilution technique was used for bypass however the hematocrit was kept above 30 with the addition of blood if necessary during bypass. It was seldom necessary to go on bypass with surgery of the right coronary artery unless cardiac output was depressed. Bypass was necessary with hypothermia of 30°C for left coronary artery surgery. The site of acceptance of the vein graft on the coronary artery was carefully prepared, and the site was always distal to significant occlusive disease. If possible, the anastamotic site was occasionally placed through a partially occluded area so both retrograde and antrograde flow would be established. The intima was not disturbed, and no attempt was made to do a local endarterectomy. The reversed saphenous vein was sutured to the coronary artery in an end-to-side fashion. This was quite readily accomplished without magnification even when the distal lumen would just accept a two mm probe. A partial occluding clamp on the aorta allowed an end-to-side aorto-vein anastamosis, while the patient was weaned from cardiopulmonary bypass. Further procedures were added as indicated. With adequate mobilization and elevation of the coronary artery from its bed we have not found it necessary to employ cardiac arrest in order to perform the



Photograph II. Operative photograph of aorto-right coronary reversed saphenous vein bypass graft.

vein to coronary anastamosis. The immediate revascularization seemed to produce vigorous myocardial contractions without asystole or fibrillation during and after the procedure. Additional procedures, such as aneurysmectomy and implants into the myocardium appeared to be well tolerated. The postoperative course of the vein bypass patients appeared to be more gratifying compared to the postoperative course of patients with internal mammary implants alone.

Discussion

The objective of the surgical management of coronary artery disease is to reduce the disability from the disease and to alter the natural course of the disease. With the advent of aorto-coronary reversed saphenous vein bypass graft, the indications for direct coronary artery surgery are now broadened. The vein bypass graft appears to be well suited in many patients with severe coronary artery disease due to the proximal occlusive nature of the atherosclerotic process that is so frequently noted on coronary anteriograms. It appears to be well accepted by these patients with severe coronary artery disease and the immediate effect of revascularization was impressive in this limited experience. The postsurgical studies have shown patent grafts with good coronary artery runoff in all patients studied, and the clinical response to date is excellent. The long-term effect of these arterialized vein segments in the coronary position are unknown at this time although one to two year follow-up has revealed patency.[3] Vein graft segments in the lower extremity are known to have long periods of success.[4] With the application of vein bypass graft either alone or in combination with other revascularization procedure, a more direct and aggressive surgical approach for the disabling effects of coronary artery disease can be accomplished.[5]

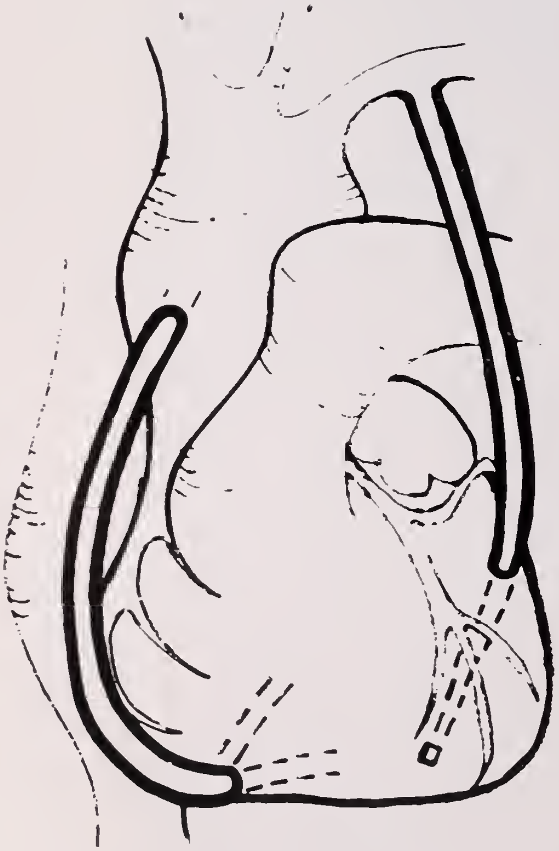


Diagram III. Aorto-coronary reversed saphenous vein bypass graft to the right coronary artery at its bifurcation. Internal mammary implant to the anterolateral aspect of the left ventricle.

The earlier attempts to perform direct revascularization with an endarterectomy procedure were associated with high mortality rates and limited application.[3] With a patch graft technique, the immediate mortality rate was less but the success rate fell in the range of 60 to 70 percent.[3] The indirect methods of internal mammary artery implants have the distinct disadvantage of delayed revascularization and limited effective blood flow in some implants.[6-9] The vein bypass graft broadens the applicability of revascularization in many ischemic hearts as well as having the advantages of lower risk and immediate revascularization. In some patients, the vein bypass would not be applicable when the distal artery is small or not patent, and then an internal mammary implant is the procedure of choice. The operative techniques of vein bypass grafts, internal mammary implants, and aneurysmectomy alone or in combinations can deliver the most possible blood to these ischemic hearts. Thus, the objective of relief of disability and alteration of the natural course of coronary artery disease can be approached in many patients with severe coronary artery disease.

Addendum

Fifteen additional patients have had aorto-coronary vein bypass grafts since this writing, with similar clinical responses.

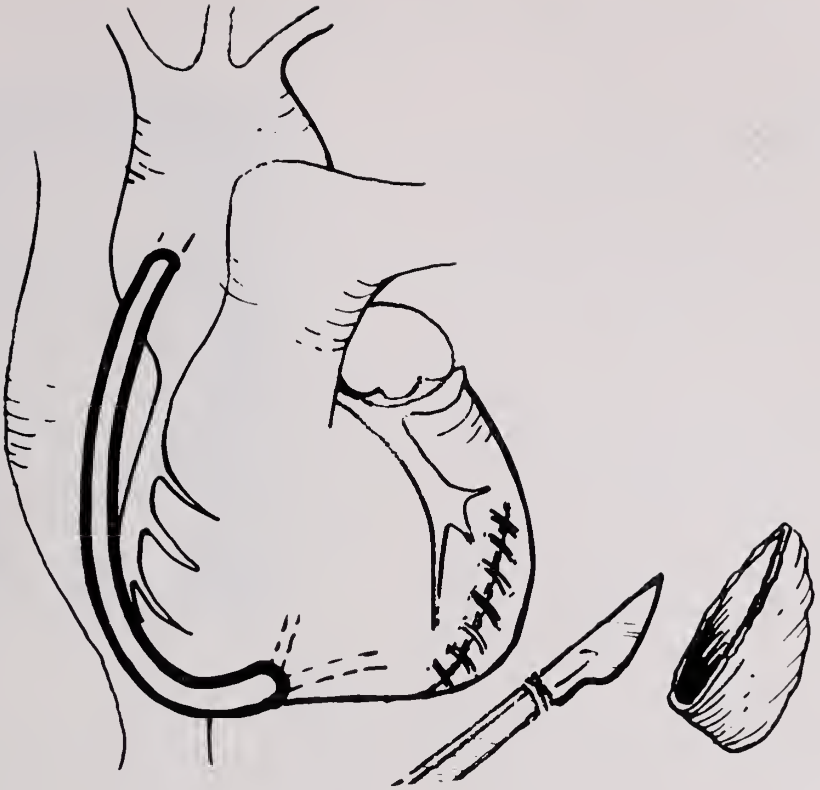


Diagram IV. Aorto-coronary reversed saphenous vein bypass graft to the right coronary artery at its bifurcation. Ventricular aneurysm excised.

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Community Health Planning

PRESIDENT'S PAGE

CLARENCE R. BROTT, M.D.

The Office of Comprehensive Health Planning was authorized by Public Laws 89-749 and 90-174.

The initial act's declaration of purpose states:

"Our national purpose depends on promoting and assuring the highest level of health attainable for every person, in an environment which contributes positively to healthful individual and family living;

Attainment of this goal depends on an effective partnership involving close intergovernmental collaboration, official and voluntary efforts, and participation of individuals and organizations;

Federal financial assistance must be directed to support the marshalling of all health resources — to assure comprehensive health services of high quality for every person, but without interference with existing patterns of private professional practice of medicine, dentistry, and related healing arts."

Changes in medical practice are talked about long before they happen — but they are being talked about now too. The Nixon administration has proposed measures that would have been unthinkable only a few years ago. In the words of top-level Administration Officials — "this nation is faced with a breakdown in the delivery of health care unless immediate concerted action is taken by government and the private sector." President Nixon, July, 1969 — "we will ask the health facility management to work with other facilities and services and reduce unnecessary duplication of facilities — what is ultimately at stake is — the voluntary nature of our health care system."

As things stand, the government can issue regulations for the programs that it pays for. It cannot force physicians to participate, nor can it regulate charges made by hospitals to patients who do not benefit from federal programs. Government, however, is concerned with the uncoordinated expansion of health facilities — which is not in the best interest of its citizens.

Congress has no vested interest in the private practice of medicine; but members of Congress do have an interest in getting reelected and seeing to it that the government gets its money's worth when federal funds pay for medical research or health care. They are also aware of public clamor for good health care at all levels of society.

The American Medical Association believes "planning, organization, and distribution of health facilities and services are a prime responsibility of organized medicine . . . (medical) societies should place increased emphasis on - - - - promotion of and participation in voluntary comprehensive planning of health facilities and services."

Nebraska is moving ahead slowly in augmenting this program. Closer liaison between Comprehensive Health and Regional Medical Program is being developed. Members of the Nebraska State Medical Association might improve their public image by active participation and more vigorous support.

WashingtoNotes

1. Health maintenance organizations

Rep. Wilbur D. Mills (D., Ark.) expressed concern about claims that prepaid group health care, or health maintenance organizations, could solve most of the problems of medicare and medicaid.

Speaking to a group of business executives, the chairman of the House Ways and Means Committee, which handles medicare and medicaid legislation, said that he believed health maintenance organizations were "a reasonable and perhaps competitive alternative" for providing government-financed health care.

"However," he added, "I have become concerned that we will expect a great deal more from them than is likely to occur. The health industry is too diversified and its problems too complex to ever conclude that any one approach will solve most or all of the problems."

Americans broke a spending record for health care this past year, paying out about $70 billion for everything from aspirin to hospitals, Mills also said. Inflation accounted for half the boost of about 16 per cent over the $60.3 billion spent in the previous fiscal year, he said.

Mills said he expects health care spending figures for fiscal 1970, which ended July 1, would show that $7 out of every $100 spent in the United States for all goods and services went for health expenditures. "Just three years ago," Mills said, "it was estimated that we would not reach the 7 per cent level until 1975."

He noted, however, that the fiscal 1970 figures would show "for the first time" that federal spending did not increase as fast as private spending for health services.

"The reason for this development is that the medicare program did not grow as fast as it had been growing," Mills said.

Mills said the new health care figures point out two major characteristics of the health industry — "rapidly escalating costs and rapidly increasing public involvement."

"Public funds now pay for one half of all the hospital care provided in the country," Mills said. "Medicare and medicaid together account for almost all of the half."

2. National insurance and catastrophic coverage

National health insurance is shaping up as one of the major domestic issues before the 92nd Congress with catastrophic illness coverage gaining support from both Democrats and Republicans.

Advocates of catastrophic coverage counted on the Nixon Administration supporting such a plan although Elliot L. Richardson, secretary of Health, Education, and Welfare, called for its rejection at that time when it unexpectedly was placed before the Senate Finance Committee in executive session late last year near the end of the 91st Congress. But he left the door open for Administration support later.

"A proposal with this impact on the health care system deserves the closest kind of examination, not the hasty look it has been given in the waning days of an executive session," Richardson said.

The secretary's comment was in response to the surprise announcement by Sen. Russell B. Long (D., La.) that he would offer a catastrophic illness coverage plan to the finance committee of which he is chairman.

Long's plan called for the government to pay 80 percent of all medical costs beyond the first 60 days of hospitalization or the first $2,000 of physicians' bills for all Americans who pay social security taxes and are under 65. He estimated the cost at $2.5 billion a year to be financed by a one-half of one percent increase in social security taxes, to be shared equally by employers and employees.

The American Medical Association also cleared the way to add catastrophic coverage to its Medicredit plan for voluntary national health insurance. The House of Delegates at the AMA 1970 clinical convention in Boston approved a report of the Board of Trustees listing catastrophic coverage among the modifications and improvements being considered before reintroduction of the Medicredit legislation.

All national health legislation introduced during 1969-70 died with the final adjournment of the 91st Congress, and some modifications were expected to be incorporated in most of the leading proposals before their reintroduction in the 92nd Congress.

Rep. Durwood G. Hall (R., Mo.), a physician, introduced during the final months of the 91st Congress legislation that would establish a government program of catastrophic illness insurance for all Americans along with a program of basic health care protection for the medically indigent.

Part A (Basic Protection) of Hall's proposal would replace the present medicaid program. Each state would be authorized to determine the level of medical indigence in that state and to purchase, from private carriers, basic health insurance coverage for the medically indigent. The states would receive federal reimbursement for 85 percent of the costs incurred in providing this basic coverage.

The states would also purchase coverage for the costs of catastrophic illness expenses for the medically indigent. There would be no federal reimbursement for this state coverage.

Part B (Catastrophic Coverage) would have the secretary of HEW establish a program of insurance against the costs of catastrophic illness. Any U.S. resident whose income is above the level of medical indigence would be entitled to reimbursement for expenses incurred as a result of catastrophic illness. Federal reimbursement would be 90 percent of total eligible expenses.

Eligible expenses would be those health care costs above whichever of the following is the larger: (a) $1,000 for those 65 or $5,000 in any other case, or (b) 25 percent of the gross income of the individual or his family.

Funds for this two-part program would be managed by a Federal Health Care Trust Fund. Money for this trust fund would be raised through a 0.4 percent tax on wages and self-employment income, and on other income in excess of $2,000 up to the maximum income in use for purposes of the social security tax. There would also be a 0.4 percent employer tax.

Hall estimates that the Part A would cost the federal government about $3.7 billion a year. The cost to the states for Part A would be about $600,000. Medicaid presently costs the states about $2.5 billion.

There was no estimate as to the cost of Part B, but Hall said that it would be only a small fraction of the cost of a comprehensive national health insurance program of the type being pushed by organized labor.

"All government efforts to date have been directed at providing first-dollar coverage," Hall said. "Invariably, first-dollar coverage entails high administrative costs, for it requires that many small claims be processed. Thereby the substance of the program is eroded. My aim is to amend and to protect existing law or substitute therefor so that the public can be insulated from disastrously high costs; give meaningful relief to those hardest hit by extensive medical expenses; make the existing program work easier; and at the same time make the greatest use possible of the dollars available."

3. Family practice and birth control

Congress in the final days of the 91st Congress approved two important medical bills dealing with family practice and birth control.

The main feature of the family practice legislation authorized a three-year, $225 million program to help medical schools establish and operate departments to train family physicians.

The legislation passed the Senate and House with virtually no opposition. It was supported by the American Academy of General Practice and the American Medical Association. The Nixon Administration opposed it, mainly because of its categorical grant character.

Only nine U.S. medical schools already have established departments of family practice, and chief sponsors of the legislation hailed its passage as an important step toward alleviating the shortage of family physicians and slowing down the trend to specialization in the practice of medicine. It was praised as "a significant step in the efforts of Congress to meet the health crisis facing this nation."

A family planning bill authorizes birth control services, except abortion, for all American women who cannot afford them. The birth control services will include contraceptive drugs and devices, as well as consultations, examinations, and instruction.

The legislation also provides for federal aid for birth control research and establishes an Office of Population Affairs in the Department of Health, Education and Welfare.

To finance the program for the first three years, House-Senate conferees agreed on a compromise authorization of $387 million. The House had approved $267 million for three years and the Senate, $967 million for five years.

Expenditure of federal funds for abortion is prohibited.

4. Cancer research

A special panel of senate consultants urged a multi-billion dollar crusade against cancer to erase its "staggering" impact of death and suffering on all mankind.

In a brief but detailed report to the Senate Labor and Public Welfare Committee on its four-month study of the disease, the 26-member panel estimated that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the president.

"The Committee is unanimously of the view that the conquest of cancer is a realistic goal if an effective national program along the lines in the report is promptly initiated and relentlessly pursued," said Benno C. Schmidt, co-chairman of the group.

"Given the seriousness of the cancer problem to the health and morale of our society, this allocation of national priorities seems to be open to serious question," the panel said.

It recommended doubling cancer research spending to $400 million in the 1972 fiscal year, and increasing it by $100 million to $150 million in subsequent years to a $1 billion level in 1976.

The panel said their recommended program "is so important to the American people and to the world" that the money should be spent even if taxes have to be raised to pay the bill.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be devoted primarily to research into the causes and cures of cancer, rather than to patient care.

The panel said that the cost of cancer has been estimated "as high as $15 billion per year," of which as much as $5 billion is spent on caring for patients. The balance is in the loss of earning power and productivity.

It said that only 89 cents was spent last year for each man, woman and child in the United States on cancer research, compared with $140 per capita on national defense, $125 for the Vietnam war and $19 each on space programs and foreign aid.

Paraplegia and Cardiac Arrest — G. R. Gode (All India Institute of Medical Sciences, New Delhi). Canad Anaesth Soc J 17: 425-456 (Sept) 1970.

Two paraplegic patients with hyperreflexia had cardiac arrest at the time of shifting to the prone position after induction of anesthesia. Both were revived. One of the patients was reanesthetized and successfully operated upon 16 days later, with precautions against hypotension.

While Making Rounds

Quote Unquote.

"The long habit of living indisposeth us for dying."

Sir Thomas Browne

"Golf: an expensive way of playing marbles."

Chesterton

"Many of the holes created by breakthroughs need mending."

Page

Words We Can Do Without.

Contradistinction

At this time ("now" is better)

Factitious

Word I Made Up.

Disastrophe

Our Own Monthly Statistical Report.

About 900 people die of cancer every day in the United States.

Strange Disease Of The Month.

Clam-digger's itch.

Who?

For appendicitis, I have come up with three firsts.

First to operate: Henry Hancock, England, 1848.
Willard Parker, U.S., 1864.

First successful appendectomy: T. G. Morton, 1887.

Poemry.

"Writing blank verse is like playing tennis with the net down."

Frost

Wish I'd said that.

Curiosity Corner.

Someone is supposed to have said that anything important can be put on one page, and I agree. He said it in a one and a half page letter.

Lines To Practice By.

"To the child with the rare disease, it is disgustingly common."

Plateau

"At every cross roads on the road that leads to the future, each progressive spirit is opposed by a thousand men appointed to guard the past."

Maeterlinck

Anniversary Time.

January 28, 1878

First commercial telephone exchange opened, New Haven.

—F.C.

What Kind of Basic Science for Clinical Medicine? — A. R. Feinstein (Yale Univ School of Medicine, New Haven, Conn 06510). New Eng J Med 283:847-852 (Oct 15) 1970.

Clinical medicine involves explanatory decisions for the names, mechanisms, and causes of disease and managerial decisions for therapeutic interventions to prevent disease or alter its clinical course. Although both types of decision use the intellectual construction of an experiment, the scientific procedures needed for managerial decisions in sick people are drastically different from the methods used for explanatory science in the simpler materials of laboratory work. Because the scientific thrust of medicine has been directed mainly toward explanatory mechanisms, a suitable "basic science" has not yet been developed for making and evaluating managerial decisions about the powerful agents of modern technology. The challenges of the new clinical basic science include reducing observer variability in data, developing appropriate new systems of taxonomy, establishing rigorous criteria for diverse clinical judgments, and improving quantification.

Who's In The News?

Doctor Rex W. Wilson, O'Neill, has been re-elected to active membership in the American Academy of General Practice.

Doctor Robert D. Sidner is now associated with the Platte Valley Medical Group in Kearney.

Doctor John R. Kantor, Blair, has opened a medical practice in Tekamah two days each week.

Doctor Kenneth F. Kimball, Kearney, was recently presented the Rockwell Manufacturing Company's Recognition Award.

Doctor Carl J. Cornelius, Sidney, was among those recently attending the Review of Surgery Anatomy Conference held in Cheyenne, Wyoming.

Doctor Kenneth D. Rose, Lincoln, has been named Chairman of the American Medical Association's Committee on Exercise and Physical Fitness. He also serves on the A.M.A.'s Committee on the Medical Aspects of Sports.

Nebraska physicians recently receiving fellowships from the American College of Physicians were *Doctor M. Jack Mathews,* Lincoln, *Doctor John D. Boyett, Doctor William G. Burrows, Doctor Robert E. Ecklund, Doctor Thomas J. Gurnett* and *Doctor Hugh S. Levin* all of Omaha.

Notes From All Over

Occult blood in the stool

A quick, accurate test to detect occult blood in the stool during routine examinations is now being marketed by Smith Kline & French Laboratories. An improved version of an established diagnostic technique, SK&F's new 'Hemoccult' slides can play an important part in the detection of hidden bleeding from gastrointestinal diseases—including colonic cancer, a disease which ranks second only to lung cancer as a cause of cancer deaths.

Medical education in northwest

A region-wide program of medical education in the Pacific Northwest involving the states of Washington, Alaska, Montana, and Idaho will be developed by the University of Washington School of Medicine, Seattle, under a grant of $996,678 announced today by the Commonwealth Fund.

The program is aimed at increasing the number of medical graduates in the vast, sparsely settled area covered by the four states, only one of which—Washington—has a medical school.

Plans for the effort call for collaboration among the Washington medical faculty and colleges, universities, and practicing physicians in the participating states to establish local teaching units, which would assume responsibility for defined segments of the School of Medicine's educational program.

Conference for family practitioner

A four-day refresher conference for the family practitioner of medicine will be held at The University of Iowa Health Center Tuesday through Friday, February 16-19, 1971.

Question and answer time is provided for each presentation. Educational films will be available for optional viewing and a special session on "Test-taking for Board Examinations" will be held. Other features include "Lunching with the Experts," "Breakfast Bull Sessions" with conference faculty members, and a late afternoon smorgasbord of faculty-guided demonstrations and self-learning presentations. An optional dinner and wine-tasting party will be held at the Amana Colonies.

For information on registration, write: Director, Office of Medical Education, 245 Medical Research Center, The University of Iowa, Iowa City, Iowa 52240.

Electronic scanning aids lung study

Scientists are now able to examine lung tissue in "3D" using a scanning electron microscope, says the National Society for Medical Research.

"The depth, range and angles viewed by the scanning process have opened new and dramatic possibilities for lung study," the group said. Lung tissue from baboons, pigs, mice, and humans were used in the development of the process.

Successful experiments were recently presented by Dr. N. S. Wang of McGill University in Winnipeg at a meeting of the Canadian Tuberculosis and Respiratory Disease Association.

Grant to Community Health Institute

Carnegie Corporation of New York announced today a grant of $249,000 toward support of the Community Health Institute (C.H.I.), an affiliate of the Community Council of Greater New York. The funds will enable the Institute to carry out an educational program designed to promote cooperation between health professionals and community groups in the planning and operation of health care services. An initial Carnegie grant was made last year to finance the development of the Institute and an experiment to test ways in which consumers (patients past, present, and future) could become more effectively involved in health care policy.

Ameriplan

The Board of the American Hospital Association at a special session on December 2 declared that Ameriplan, the proposal of its Special Committee on the Provision of Health Services is a "milestone in the health care industry."

In announcing the action, Edwin L. Crosby, M.D., executive president of AHA, said the Board voted to endorse in general the goals and concepts of Ameriplan which calls for a substantial restructuring of the nation's health care delivery system.

AHA's Board said it supports the clear delineation that "health care is an inherent right of all individuals."

Ameriplan will be reviewed by the appropriate bodies before it goes to the Association's House of Delegates at the annual meeting in Washington, D.C., January 25-27, 1971.

The AHA Board also stated that it "recognizes especially the need for a system for comprehensive health care, provided through a reorganized delivery system, and a pluralistic financing system to assure these health services . . . . taking fullest possible advantage of the values inherent in our voluntary system."

The Board also voted its support for the committee proposal that the Health Care Corporation is the innovation basic to this new approach in restructuring the health care delivery system.

Earl Perloff, a hospital trustee from Philadelphia and chairman of the AHA committee, in publicly announcing Ameriplan on November 24, said the Health Care Corporations would provide truly comprehensive health care to a defined population. The establishment of Health Care Corporations, Mr. Perloff added, would allow the delivery of health care.

Ameriplan sets up Health Care Corporations in a manner that would require each HCC to develop a mechanism through which the community would be able to express its health needs and through which the Corporation could respond. Each individual in the HCC would have opportunities for representation in identifying how health services should be provided, in determining how care could be made more accessible, and how the delivery of care could best support the dignity of the individual and his family.

Ameriplan also states that reorganization of limited resources in manpower, facilities and services can only be accomplished by the cooperative commitment of all providers, including physicians.

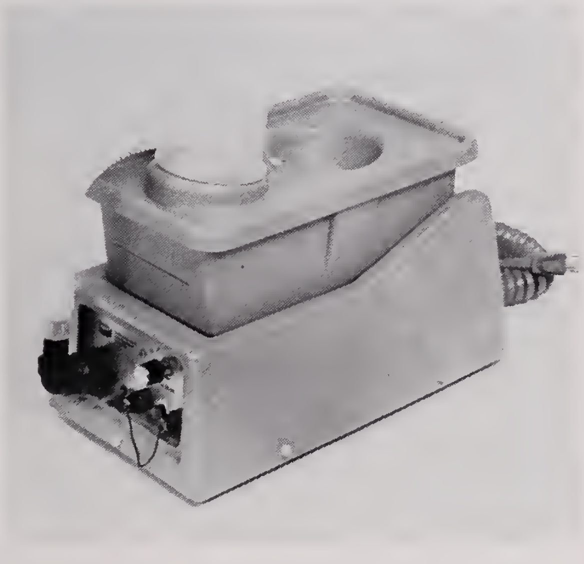
Ameriplan would use both federal government and private financing and once implemented would make Medicare and Medicaid no longer necessary. Ameriplan differs significantly from the many proposals that deal only with the financing of health services in that it suggests a solution to the problem of establishing the necessary standards and an organized system for the delivery of health services throughout the nation.

In its statement on Ameriplan the AHA Board said it "recognizes that the committee's report designs a basic blueprint to reach stated goals. The Board trusts that all of those concerned with the improvement of our health care system will to the extent possible contribute to the final configuration that will prove of greater service to the American people."

It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precautions, and side effects.

The Journal assumes no responsibility for drugs and other products listed here.



Nebulizer for respiratory disease

A new ultrasonic nebulizer, used to treat respiratory ailments including emphysema and cystic fibrosis, has been developed by the Bendix Instruments & Life Support Division here.

The highly portable, self-contained device generates high frequency sound energy which disintegrates liquid medication into particles at a precisely controlled rate. The resulting fog or aerosol is administered to the patient through a mask or oxygen tent.

Because the liquid particles are so small—several times smaller than ordinary steam droplets—they penetrate into the deepest recesses of the respiratory tract.

In order to prevent cross contamination of patients, the Bendix design incorporates an inexpensive, disposable polyethelene container in which the medicament is both stored and nebulized. For patients requiring an oxygen-rich aerosol, oxygen is fed into the throw-away container and mixed with the nebulized medicament. The container is believed to be the first of its kind.

The new ultrasonic nebulizer, one of a number of new products being developed by the Bendix Instruments & Life Support Division for treating respiratory diseases, will be marketed by V. Mueller/Division American Hospital Corporation, Chicago, Ill.,60648.

The ultrasonic nebulizer was demonstrated by the Bendix division at the annual meeting of the American Association for Inhalation Therapy, Nov. 14-18, 1970, in New Orleans, La. The Bendix Instruments & Life Support Division is located at 2734 Hickory Grove Road, Davenport, Iowa 52808.

Drug abuse detection

Biosphere Systems, Inc. of Detroit, Michigan, announces the availability of a series of laboratory tests and procedures specifically designed for drug abuse detection and monitoring. Five categories of chemical pharmacologics, commonly employed in drug abuse, are screened and identified. These include: Morphine and its derivatives, synthetic morphine substitutes, amphetamines, barbiturates and a variety of commonly used psychoactive drugs.

Toxicological testing is provided physicians, clinical laboratories, hospitals, mental health and drug abuse programs, industrial organizations, and the courts.

For additional information, fee schedules and specimen-handling procedures contact Biosphere Systems, Inc., P.O. Box 4909, Redford Station, Detroit, Michigan 48219.

Pediatric limb holder

The most advanced Posey limb holder is now available for children. Designated the Posey Pediatric Deluxe Limb Holder, it is comfortable for the child because it will not tighten or loosen. The perfect fit is secured by Velcro closures; long straps secure under the bed. This all-new concept enables the most active child to be held comfortably with complete security.

The Posey Pediatric Deluxe Limb Holder, #5163-4725 is priced at $5.40 a pair. For further information contact your local hospital supplier, or the Posey Company, 39 South Santa Anita Avenue, Pasadena, California 91107.

New PD tape

Parke, Davis & Company announced recently the introduction of a new Orthaletic Elastic Adhesive Tape to the firm's medical-surgical products line.

Joseph D. Williams, Group Vice President of Corporate Marketing, said that the new product is a flesh-colored, all-cotton elastic bandage, with high-quality adhesive applied to one side. Aimed at the athletic field, the tape is particularly useful in providing firm and flexible support for taping knees, elbows and shoulders.

Educational nursing programs

Trainex Corporation announces the availability of five new audio-visual, patient-care programs for use in nursing education and inservice training. The new program titles are: "Congestive Heart Failure"; "Lidocaine Hydrochloride: a Local Anesthetic and Anti-arrhythmic Agent"; "How to take an Electrocardiogram"; "Operating Room Draping One: Mastectomy and Lithotomy"; "Operating Room Draping Two: Thoracotomy, Laparotomy and Extremity."

Each program consists of a full-color, 35 mm filmstrip along with a narration of approximately 20 minutes, recorded on a standard LP record or a tape cassette, plus a printed Instructor's Guide and Script.

Trainex Corporation presently offers a library of over 100 programs, each dealing with a specific health-care procedure, and new programs are constantly under development. These programs are directed toward a variety of departments within the Hospital or nursing institutions.

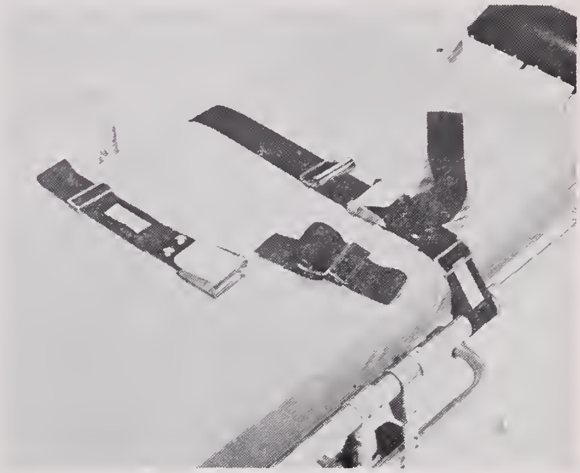
For a complete list of program titles, along with information on the Trainex™ free trial preview and time-payment plans, contact Trainex Corporation, a subsidiary of Simplicity Pattern Co., Inc., P.O. Box 116, Garden Grove, Calif. 92642, (714) 636-1640.

Retractable stretcher belt

The Posey Company combines both strength and convenience in their new Retractable Stretcher Belt. Not only does the belt provide needed security promptly and easily, but retracts quickly into a compact unit when not in use. This belt adjusts to fit almost every type of stretcher, guerney and operating table. Retractable belt eliminates the belt dragging on floor or being in the way when not in use.

The Posey Retractable Stretcher Belt is available in both conductive and non-conductive sets. The non-conductive set, #5163-5605 is $24.00 set; conductive set, #5163-5606 is $25.80 set. A set includes two complete units.

Inquiries and orders concerning this product should be directed to your local hospital supplier, or the Posey Company, 39 South Santa Anita Avenue, Pasadena, California 91107.



Obituaries

By medicine life may be prolong'd
yet death
Will seize the doctor too.
—Shakespeare

John R. Curry, M.D., Lincoln, Nebraska

Doctor John Curry was born in Agnew, Nebraska, on August 14, 1908. He died November 6, 1970, at the age of 62.

Doctor Curry graduated from the University of Nebraska College of Medicine in 1934. Following graduation from medical school he practiced in Blackwell, Oklahoma, until 1942. He was a surgeon in the Air Flight Service in the Pacific during World War II with the rank of major.

A former Chief of Staff of Bryan Memorial Hospital, he had retired in September of 1970.

Therapeutic Barium Enema for Massive Diverticular Bleeding — J. T. Adams (260 Crittendon Blvd, Rochester, NY 14603). Arch Surg 101:457-460 (Oct) 1970.

The use of a barium enema for the control of massive bleeding from diverticular disease of the colon was evaluated in 22 patients studied prospectively. Twenty-six of the 28 acute bleeding episodes in these patients were arrested by the enema. The two patients who continued to bleed were treated by an immediate colectomy while elective colon resections were carried out in three patients after the acute bleed had been controlled by the barium. The only complication of the procedure was a laceration of the rectal mucosa by the enema tube in one patient. All 22 patients survived their bleeding episodes or operations. The probable mechanism is a tamponade of the bleeding site by the barium solution. Failure of the enema to control the bleeding suggests that the bleeding will not subside spontaneously and early operation should be undertaken with resection of all colon shown to contain diverticula.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS:
January 9 — Cozad
January 23 — Norfolk
January 30 — Scottsbluff
February 20 — Hastings

ARIZONA HEART ASSOCIATION—Fourteenth Annual Cardiac Symposium, Arizona Biltmore Hotel, Phoenix, Arizona, January 22-24, 1971. Speakers on program include Roman DeSanctis, M.D., Joseph Perloff, M.D., Gilbert Blount, M.D., and Rene Fabalero, M.D. For information write Arizona Heart Association, 1720 E. McDowell Road, Phoenix, Arizona 85006.

RURAL HEALTH — 24th National Conference; Atlanta Marriott Motor Hotel, Atlanta, Georgia; March 25-26, 1971; sponsored by the AMA Council on Rural Health.

SOUTHWESTERN SURGICAL CONGRESS, 23rd Annual Meeting — April 19-22, 1971; Caesar's Palace Hotel, Las Vegas, Nevada. Write to: Jack A. Barney, M.D., Secretary-Treasurer, Southwestern Surgical Congress, 301 Pasteur Building, Oklahoma City, Oklahoma 73103.

NEBRASKA STATE MEDICAL ASSOCIATION — 103rd Annual Session, April 25-28, 1971, Omaha Hilton Hotel, Omaha, Nebraska.

AMERICAN MEDICAL ASSOCIATION — Annual Convention, Atlantic City, New Jersey, June 20-24, 1971.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting, House of Delegates and Board of Councilors, September 24, 25 and 26, 1971, Holiday Inn, Kearney, Nebraska.

Medicinews

ACS and liability insurance

The Regents of the American College of Surgeons feel obligated to inform the public that the rising number of lawsuits against physicians is seriously threatening the quality of surgical care and increasing its cost to patients.

Some surgeons feel compelled to treat patients under a concept which stresses avoidance of litigation rather than the application of their best clinical judgment.

Instead of attempting procedures which may cure the patient, but have a higher risk of failure and exposure to the threat of a lawsuit, some surgeons may prefer to use standard, proved, conservative methods which might bring relief to the patient, but will not cure him.

The rash of lawsuits has driven many other surgeons to still another extreme. To protect themselves against possible litigation, they are being forced to order costly tests and elaborate x-rays which under normal conditions would not be required.

It is not generally appreciated by the public that hazards are inherent even in well established surgical procedures. The practice of medicine is a combination of art and science. Even though medicine as a science is highly advanced, a precise result in treatment never can be guaranteed. Although the physician may demonstrate the highest possible knowledge and skill so that a jury would not be expected to find fault with his actions, it still might find against the doctor, simply because the doctor has insurance and the patient had a bad result.

To protect himself against unexpected litigation, a surgeon, like an automobile driver, must have adequate liability insurance.

Because insurance companies are being required to pay out larger and larger compensation, they are finding it necessary to raise their premiums for doctors. Several insurance companies have ceased to issue professional liability insurance. In Hawaii, as well as in certain southwestern and western states, many surgeons are faced with nonrenewal of their policies even though they never have been involved in any medico-legal action. This may force some surgeons to give up their practice, thereby aggravating the problem of an already deficient supply of physicians.

The Regents of the American College of Surgeons believe the problem extends beyond the profession and requires increased public awareness for its solution.

Diabetes conference

The Eighteenth Postgraduate Course, *Diabetes in Review: Clinical Conference 1971,* will be held at the Kahler Hotel, Rochester, Minnesota, on January 20, 21, and 22, 1971, in cooperation with the Mayo Clinic - Mayo Foundation, Rochester, and the University of Minnesota School of Medicine and Health Sciences Center, Minneapolis. The Postgraduate Courses are presented annually by the Committee on Professional Education of the American Diabetes Association.

The faculty for the Course is comprised of 37 authorities on clinical practice and research related to diabetes. The sessions, held each morning and afternoon, will include the following subjects: natural history of diabetes and criteria for diagnosis, biosynthesis of insulin and proinsulin, control of insulin secretion, molecular basis for action of insulin, carbohydrate and fat metabolism, diabetes in childhood, unstable diabetes, oral hypoglycemic agents, diet, education of the patient, endocrine syndromes associated with carbohydrate intolerance, biochemical basis of vascular disease and neuropathy, basement membrane abnormality in diabetes, nephropathy, renal and pancreatic transplants, retinopathy, treatment of peripheral vascular disease, neuropathy, gastrointestinal manifestations, pregnancy, ketoacidosis, and nonketotic comas.

Registration: The three-day Course is open to Doctors of Medicine. Registration fee is $75 for members of the American Diabetes Association and $100 for nonmembers. Residents and interns, as well as fellows in a training status who have not completed five years of formal training (excluding the period of obligated government service) from the area of the Course, may attend the scientific sessions without charge. They should register by January 8. If space permits, medical students may register without charge after January 8.

Accreditation: The Course is acceptable for 17 hours of elective credit by the American Academy of General Practice.

Note to Editors: A copy of the printed program is enclosed. Additional programs, registration forms and further information may be obtained by writing the American Diabetes Association, 18 East 48th Street, New York, NY 10017.

January is blood donor month

Announcement that President Nixon had proclaimed January of 1971 as National Blood Donor Month was a highlight of the 23rd meeting of the American Association of Blood Banks attended by 2,900 at the San Francisco Hilton, October 27-30, 1970.

Another highlight was recommendation by a National Research Council committee that donor blood should be tested for the hepatitis-associated antigen "when the methodologic, supply and licensure problems are solved." This was presented by Dr. James T. Sgouris, Michigan Department of Public Health, Lansing, Mich., one of six scientists who authored the report requested by the Association, the armed forces and the Public Health Service.

Artificial kidney system

Physicians attending the American Society of Nephrology meeting saw a new Milton Roy one or two patient artificial kidney system which can be rented through Searle Leasing Corporation, a subsidiary of G. D. Searle & Co., for as little as $99 a month.

The system is unique in that it has a one or two patient capability and can be used with any type of artificial kidney unit. For single-patient use in the hospital or home, a typical system consists of Milton Roy Company's mRoy BR Dialysate System, a coil type artificial kidney unit, and a heparin infusion pump. Total cost for this complete system is $4275.

Under a 5-year lease, this system can be rented for $99 a month, or about $3.30 a day. A 3-year lease involves a monthly rental of $150, or approximately $5.00 a day. A parallel flow artificial kidney unit can be supplied instead of the coil type.

For hospital use, this same basic system can be used for two patients by adding an optional secondary patient station and a second artificial kidney unit. Cost for this patient station is $1495, and it is also available under a lease arrangement.

Additional information can be obtained by telephoning (813) 544-2581 or by writing to Milton Roy Company, Box 12169, St. Petersburg, Fla. 33733.

Wyeth labs adds new item

Wyeth Laboratories has added repository corticotropin injection U.S.P., 40 U.S.P. units (1.0 ml) and 80 U.S.P. units (1.0 ml), to its Tubex line of unit dose medications in pre-filled sterile cartridge-needle units. The new product is supplied in packages of ten Tubex units.

Rare disease on rise in U.S.

Brucellosis, a disease caused by various strains of brucella organisms, has not been a major health threat in this country since over 6,000 cases were reported in a single year about two decades ago.

At that time, the animal reservoir of the disease included mainly cattle, goats and swine. It spread to humans or from one animal to another through contaminated milk or by containers with infected urine or feces. Now, according to the National Society for Medical Research in Washington, a new strain of the brucella organisms which has only been known for five or six years, is being found in the general population of dogs.

The new strain, called Brucella Canis, has been brought to the attention of the Society by university research facilities which identified the organism in dogs received from local pounds and dealers. "This has revived our interest in the subject, and indications are that the disease may be more widespread than veterinary clinicians and physicians thought," said the group.

Human symptoms of the disease commonly called undulant fever are characterized by mild fever, loss of appetite and sore throat. They are flu-like and may also include muscular pains.

Symptoms to look for in infected male dogs are painful testes, fever, and loss of appetite. In female dogs, the symptoms are abortion, fever and loss of appetite.

The 28th annual Gorgas Medal for accomplishments in preventive medicine is presented to Colonel Dan Crozier (right), U.S. Army Medical Corps, during the meeting of the Association of Military Surgeons in Washington, D.C. Making the presentation is George E. Farrar, Jr., M.D., Director of Medical Services for Wyeth Laboratories, which sponsors the Medal.

Col. Crozier is Commanding Officer of the U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, Maryland. He was honored for his scientific contributions to the understanding of infectious disease processes and the development and testing of vaccines, including the human use of vaccines in medical defense measures against potential microbiological weapons.

The Gorgas Medal has been presented annually by Wyeth Laboratories in honor of Dr. William Gorgas, whose leadership in controlling yellow fever and malaria in Panama made possible the construction of the Panama Canal.

Out of the Blue

Sweet compulsion doth in music lie.

Lie is right. I have finally made my New Year's resolution, even though people seem to have stopped making them. Anyway, it is the year that is new, not the resolution. I promise that I will never buy anything called to my attention by a singing commercial.

No name.

One of my favorite Latin medical words is innominate. It means nameless, but it's the name of an artery, a bone, and a vein. The artery is called something else now, but it is the bone that puzzles me most. For the bone is really three other bones and has four different names (hip bone, os coxae, hucklebone, and innominate bone), one of which is of course nameless.

If more structures were called innominate, fewer students would fail anatomy. I deplore the removal from our literature of wonderful words like innominate; as they disappear they take with them too much of the romance of medicine, and we cannot afford that.

Why was the artery once called nameless? This gives rise to all sorts of wool-gathering. The anatomy is different on the two sides, and perhaps they didn't think it was necessary to give it a name, or maybe they had no name left over for the right side. It's still innominate to me.

On colectomy.

A colon is a punctuation mark, until it gets irritable. Come to think of it, the semicolon looks a lot like an irritable colon. I wonder why the surgeon doesn't think so, too. He could do a semicolectomy.

Editors remove colons, too. And when the surgeon got this editor out at night, you might say he had accomplished a colectomy.

Under the influence.

We never did identify the agent responsible for the 1918 influenza epidemic, but it was a real bugger, if you like puns. You didn't call up and say you were taking the day off, you had the flu, you'd be back to work tomorrow; it killed you dead right now.

But it got its name from the fact that people thought its epidemics were brought about by the influence of heavenly bodies.

Now they may have been right. We still don't know what caused it. And within our own solar system, just see how great an influence heavenly bodies have on us. For they may make us sunny, or jovial, or mercurial. Or we can be solitary, or saturnine, or even moony. Some of us are earthy and some, of course, are martial.

And one or two are plutocrats.

—F.C.

Esophageal Perforation During Vagotomy — J. B. Hauser and R. J. Lucas (771 Fisher Bldg, Detroit 48202). Arch Surg 101:466-467 (Oct) 1970.

A review of 1,180 subdiaphragmatic vagotomies performed during the last ten years revealed six esophageal perforations. Sliding hiatus hernia, especially when associated with long-standing esophagitis, and previous gastric or esophageal surgery were implicated as predisposing factors. All patients had anterior lacerations; the operative reports consistently describe difficulty in dissecting the anterior vagal fibers from the muscularis of the esophagus. Five of the six perforations were recognized at the time of operation and were repaired. All but one of the patients survived. The death in the patient with a recognized perforation occurred on the fifth postoperative day, probably from pulmonary embolus. The only patient in the series with an unrecognized perforation died 36 hours postoperatively from fulminating mediastinitis and sepsis.

Picture Gallery

AMA 24th
Clinical Convention,
Boston, November 29 -
December 2, 1970

The Funny Bone

The Chart.

"Heavy lifting is inadvisable, but it is not harmful."

Department Of Definitions.

Homosexuality: the answer to the population explosion.

How Much Do You Weigh?

"That's what I weighed the last time."

Remember?

Sarsaparilla.

Slow Death Of The English Language.

"He's a little short fellow."

The Oldest Medical Joke.

I guess I heard this the day I entered medical school. You know, doctors bury their mistakes. Well, architects cover their mistakes with ivy, lawyers with whereases, and cooks with mayonnaise. And now I've read that lawyers tend to leave theirs swinging in the air.

Pet Peeve.

Toothpicks.

—F.C.

Fifty Years of Practice

I am a sentimentalist and a historian, and the most moving scene at the annual session is, I think, the awarding of the pins for fifty years of practice.

So I invited the doctors who were given pins at the 1970 meeting to write for the Journal, telling whatever they wanted to tell about their lives and their practices.

These are the letters I have received. They're wonderful reading.

—F.C.

Dear Dr. Cole:

I was born in Butte, Montana, October 6, 1897. There were 7 children in the family, 3 boys and 4 girls. The three boys all studied medicine and graduated from Creighton University. My older brother graduated in 1919 and was a surgeon in San Francisco at the time of his death in 1933. I graduated from Creighton Medical in 1920. My younger brother graduated from Creighton Medical in 1924 and practiced in Martinez, Calif.; he died in 1963. My son Jack Carroll graduated from Creighton Medical in 1947 and is now practicing in Tucson, Arizona. After leaving my internship at St. Joseph's Hospital, Omaha, I began the practice of medicine in Laurel, Febr. 22, 1921, where I have resided continuously. Since my tenure in Laurel, I served on the town board for 10 years, the last 5 years as mayor of Laurel, resigning in 1936. In May, 1938, I began serving as a member of the Laurel School Board for a period of 18 years, when I resigned in 1955.

I have been a member of the Nebraska Medical Society continuously since my tenure in Laurel in 1921. I have served as a member of the House of Delegates on numerous occasions from the 5 county medical society. I have been a member of the Sioux Valley Medical Society for the past 15 years and was president of the Society from 1959 to 1960. I was married to Marie Maney of Omaha Sept. 1, 1920, and will celebrate our golden wedding anniversary next Aug. 20, 1971. We have one son Dr. J. J. Carroll, and have 4 grandchildren, 2 grandsons and 2 granddaughters. One of the boys expects to enter medical college after his graduation next spring.

Yours very truly,

R. P. Carroll, M.D.,
Laurel, Nebr.

Dear Dr. Cole:

I was born in a rural area near Ames, Ia.

Attended elementary school in a one room rural school. Premedical at Fremont College and Highland Park College at Des Moines, Ia.

Graduated from University of Nebraska Medical College with an A.O.A. appointment and took postgraduate work in obstetrics in Chicago at the Lying In Hospital. Internship at the University Hospital. Practiced eight months in Norfolk, Nebraska, and forty-seven years in Battle Creek, Nebr., and now in retirement at 402 Park Ave., in Norfolk, Nebr.

I was married and had one son and one daughter.

F. X. Rudloff, M.D.

Dear Doctor Cole:

I was born in a small village in Denmark, Europe, on April 7, 1887. At the age of 9 I came to the United States, to a farm in Central Nebraska. I knew no English at the time. For the next 5 years I attended a small, 7-month term, rural school; and in the winter 1901-02 three months in the 7th grade. There were no high schools in our part of the country; so I continued with farm work, either at home or working for neighbors until I was 22 years old.

At that time I was dissatisfied with myself and decided to get a business education for which I enrolled at Dana College, at Blair, Nebr. However, I was not satisfied with that and went on to complete the academic course (equivalent of 4-year high school), graduating in 1913. Then I taught high school subjects for a year; and then entered the Pre-Med course at University of Nebraska in the fall of 1914. And from there I went to University Medical College at Omaha as a member of the class of 1920.

The class of 1920 was, of course, the war class which graduated and took State Board exams in November of 1919. At the time of graduation I was given a scholarship in Pharmacology which I began in December of 1919. However, after a month of shooting morphine into rabbits, I decided that was not why I studied medicine. Consequently I went right over into Iowa to help out in the treating of influenza epidemic patients.

I took Iowa State Board by examination, and when the depression of 1920 came on I went to Wisconsin, taking reciprocity with Iowa.

From then on it seemed like either illness or depressions made it difficult to support my family in the small towns I had chosen to practice in. So in the summer of 1935 I moved the family to Blair, Nebraska and went into government service with Civil Conservation Corps for 6 months. However, before times improved, World War II came on and I found myself serving in one field or another, last 11 years with the V.A. Hospital Medical Service at Lincoln, Nebraska, until I retired at age 70, in 1957.

As for my family I gave that in detail, I am sure that you can condense that as easily as I can. If not, here is a brief resume; Mrs. Pedersen has no degree, except the one that would be conferred in the school of hard knocks.

Our children: Helen, R.N.; Paul, M.D.; Arthur, M.D.; Inga; Ruth, B.Sc. in Technology; Catl, M.D.

Sincerely,
Andrew M. Pedersen, M.D.,
Retired.

Dear Doctor Cole:

I was born in Cassville, Wisconsin, October 1, 1894. During these years my father was farming, but in 1900, they, with four sons and daughters, moved to Boulder, Colorado, where I attended grade school, State Preparatory High School, and two years at the University of Colorado obtaining the necessary requirements for entering the University of Colorado Medical School from which I graduated, receiving my medical diploma June 14, 1920.

After passing the Colorado State Medical Board Examinations, I started the private practice of medicine and surgery on July 2, 1920 in Sterling, Colorado. My number of patients steadily increased each month and at the end of the third month, Dr. J. D. Cochran, who had a large practice at Haxtun, Colorado, 38 miles east of Sterling, wanted me to take over his practice for ten days while he went on a much needed vacation since he, after two years rush of influenza epidemic, had had no time off. I consented to look after his practice during his vacation and he was so well pleased on his return that he wanted to go to Sterling and start specializing in urology and would stay with me for a few months to get me well introduced to his practice and leave me the practice.

On November 1, 1920, I moved to the lively farm town of Haxtun, Colorado, with a population of 1400 and surrounded by 1400 square miles of good dryland farms and farm homes. There was a twenty-bed hospital located here and enough work for three doctors most of the time. I remained here for ten years and eight months when I decided to accept the medical superintendency of the Nebraska Orthopedic Hospital at Lincoln, Nebraska, which had a capacity of 110 beds.

I began my duties of medical superintendent of the Nebraska Orthopedic Hospital on June 8, 1931, and began immediately to select surgical and hospital equipment for the newly finished annex building and its connections with the older administration and hospital section. During the following years, the orthopedic patients admitted were greatly increased as were also the orthopedic operations and procedures.

On June 24, 1935, I became a Diplomate of the National Board of Medical Examiners. It was a little over a year after the Nebraska Crippled Children's Services was established with aid from the Federal Government that the Nebraska Orthopedic Hospital was designated the treating center for these patients. The attending orthopedic and medical staff was increased as well as scope of services and the establishment of a one-year residency training in Children's Orthopedics.

In 1964, the South H. Winnett Orr addition to the Nebraska Orthopedic Hospital was completed and this furnished new quarters for the physiotherapy department, clinic and x-ray facilities and new school rooms.

I accepted the position at the Nebraska Orthopedic Hospital with the desire to gain more knowledge in the treatment of fractures and orthopedic conditions as well as administrator, so while there I assisted and participated in the operations and care of the patients. Observing the curing and benefitting of many patients and seeing them rehabilitated, trained, and educated to adequately perform and execute the duties of different types of needed world workers was inspiring and rewarding.

I retired from the superintendency of the Nebraska Orthopedic Hospital on June 30, 1965, after thirty-four years of service and moved to Sioux Falls, South Dakota, where I have been and am at present employed full time at the Dr. Robert E. Van Demark Orthopedic Clinic, Sioux Falls, South Dakota.

I appreciated receiving the 50-year pin.

Respectfully yours,
Floyd A. Alcorn, M.D.

Inspiratory Obstruction — T. J. H. Clark (Guy's Hosp, London). Brit Med J 3:682-683 (Sept 19) 1970.

Inspiratory obstruction can be demonstrated by measuring the forced inspiratory volume in one second (FIV_1) and relating it to the FEV_1. Normally the FEV_1/FIV_1 is about 85%, whereas much lower values are obtained in patients with expiratory airways obstruction. This is in contrast to patients having a predominantly inspiratory obstruction where values in excess of 100% are found. Inspiratory obstruction can be readily distinguished from expiratory obstruction. A patient with a laryngeal lesion causing inspiratory obstruction was also found to have CO_2 retention associated with a well-preserved FEV_1. This suggested that CO_2 retention may be related particularly to inspiratory obstruction and in 15 patients the PCO_2 was correlated with both FEV_1 and FIV_1. There was no difference between these correlations; thus the CO_2 retention may be caused equally by inspiratory and expiratory obstruction.

Down Memory Lane

1. In manipulating a compound fracture it is of great importance to manipulate with as little damage as possible.

2. When the pandemic of influenza was on the wane, epidemic encephalitis appeared.

3. There is no specific treatment.

4. It is unnecessary to argue the importance of focal infections in their bearing upon such important conditions as arthritis, cardiac and renal disease, arterio-capillary fibrosis, gastric ulcer, cholecystitis, appendicitis, neuritis and other lesions.

5. Vitamines are present and are needed in such small quantities in the food that chemists have not yet been able to isolate them from the many other compounds which are in foods.

6. Volume V of the Nebraska State Medical Journal closed with the December number.

7. The days of the general practitioner are apparently numbered.

8. It is no longer a secret that in the fall of 1918 the British found themselves with a serious problem involving thousands of patients on account of failure to get good results in the early treatment of fractures.

9. We do not go as far as some in catheterizing every child without a very apparent diagnosis, but in a child with fever where some very apparent cause does not exist, we will not make a definite diagnosis without getting a specimen of the urine.

10. The clinical history with characteristic gall stone symptoms does not always agree with the x-ray diagnosis.

Nebraska State Medical Journal
January, 1921

Hemodynamic Study of External Cardiac Massage — B. Letac et al (Hopital Ch.-Nicolle, Rouen, France). Presse Med 78: 1735-1738 (Sept 26) 1970.

The quality of the circulation produced by external heart massage is little known. To determine the true efficacy of external cardiac massage (ECM) a hemodynamic study with measurement of aortic and right atrial pressures and of cardiac output was carried out in four patients during cardiac arrest submitted to the usual resuscitation measures. On the whole, the values of cardiac index obtained by ECM were very satisfactory; the average value of 18 measurements was 1.44 liters/min/sq m. The frequency with which external massage is carried out determines the cardiac output; the output rises when the number of compressions per minute is increased, even when the frequency exceeds 100. The pressures produced by external massage have special characteristics — they are almost identical in the right and left heart circulations, and are characterized by high, narrow peaks.

Gamma Ray Spectrometric Method Using Lithium-Drifted Silicon Detector to Determine Antimony Deposits in the Lung in Vivo — P Bloch. Radiology 96:657-658 (Sept) 1970.

The quantity of antimony present in antimony pneumoconiosis may be determined using x-ray spectrophotometry by measuring the fractional transmission of x-rays of two different energies through the lung, one being slightly less and the other slightly greater than the K-shell binding energy of antimony.

Our Medical Schools

Continuing education

The University of Nebraska Medical Center's department of continuing education has scheduled two courses for February, 1971.

The patient with respiratory disease will be considered at the course February 3-5.

Guest speakers will include Dr. Bertram Carnow, chief, section of environmental health, University of Illinois College of Medicine; Dr. Charles B. Carrington, associate professor of pathology, Yale College of Medicine; Dr. F. E. Hargreave, lecturer in medicine at McMasters University in Hamilton, Ontario, Canada; Dr. Robert E. Hyatt, associate professor of physiology, Mayo Clinic; Dr. Vernon N. Houk, deputy chief of the tuberculosis branch, Center for Disease Control, Atlanta, Georgia; and Dr. Harold G. Muchmore, associate professor of pulmonary diseases at the University of Oklahoma School of Medicine.

The course is open to members of the allied health professions as well as physicians. The fee will be $50 for members of the allied health professions and $75 for physicians. The course offers 18 hours of credit in category I with the American Academy of Family Practice.

Dr. Irving Kass is coordinator of the course which will be held in the Storz Pavilion of Clarkson Hospital. Dr. Kass is a professor of internal medicine at the University of Nebraska College of Medicine.

Clinical otorhinolaryngology will be the subject of a course February 18 and 19. The course will be limited to physicians. The $50 fee will cover two luncheons. The course offers twelve hours of category I credit in AAFP.

Guest faculty members will include Dr. B. Hill Britton, assistant professor of otolaryngology at the University of Southern California School of Medicine; Dr. Eugene N. Myers, assistant professor of otolaryngology at the University of Pennsylvania School of Medicine; Dr. Joseph H. Ogura, head of the department of otolaryngology at Washington University School of Medicine; and Dr. Thomas T. Smith, professor of otolaryngology at Creighton University School of Medicine.

The course will also be conducted in the Storz Pavilion of Clarkson Hospital.

Dr. C. Thomas Yarington, Jr., professor and chairman of the department of otorhinolaryngology at the University of Nebraska Medical Center, will be course coordinator.

Family practice: division to department

The division of family practice at the University of Nebraska Medical Center was elevated to a department by the University regents recently. Dean Robert Kugel said the promotion had the unanimous approval of the executive faculty at the College of Medicine.

One of the major goals of the new department at the Medical Center is to relieve the critical shortage of family physicians in the state. "This added stature should help us accomplish our goal by impressing upon medical students the recognition the College administration places upon the field," Dr. Francis Land said.

Dr. Land, who has headed the division since its inception in September, 1969, will continue as chairman of the department.

Last July four physicians began residency programs at the Medical Center. In five years the department expects to have 60 residents.

Dr. Carver appointed

Dr. Michael J. Carver has been named an assistant dean for student affairs at the University of Nebraska Medical Center. Dr. Carver has been a professor of biochemistry and research professor of psychiatry at the

Medical Center since 1966. He joined the faculty in 1954 as an instructor.

Dr. Carver will deal primarily with counselling the two sections of the freshman class — the "physician augmentation" group which began its studies in June and the regular group which started in September. Dr. Carver will continue to spend half of his time in biochemical research.

A prolific author of scientific papers, Dr. Carver's main areas of research have been inborn errors of metabolism and neurochemistry.

From the Editor

Progress in liver transplants

A new method of preserving livers up to five hours for transplantation has been developed at Harvard University.

According to a statement by the National Society for Medical Research, the experiment involved livers from monkeys which were removed and stored in a cooled salt solution for five hours. They were then transplanted back into the same monkeys from which they were originally removed, and the animals are now alive and well after 18 months.

The Society said the experiment has great implications toward a similar possibility with human livers, but additional work is needed. "The technique demonstrates that it is possible to minimize harm to an isolated liver which has been cut off from its normal blood supply by cooling it to a sufficient degree. The process does not require the use of complicated oxygenators and pumps now necessary to the preservation process," they said.

AMA applauded for safety glazing support

A consumer safety group has praised the American Medical Association (AMA) for urging state medical societies to promote safety glazing legislation and assist in developing educational programs on safety glazing.

The recommendations were made in a joint statement by two AMA councils, on occupational health and on environmental and public health, to all state medical societies.

"We applaud the AMA's progressive and needed effort to stress to physicians the hazards of non-safety glazing in high-traffic areas of homes, and commercial and public buildings," said M. N. Zeolla, chairman of the Consumer Glass Safety Committee (CGSC). "Its suggestion that medical groups take positive action to minimize these hazards is commendable."

The CGSC is a cooperative group of government, safety, labor and industry representatives seeking to insure that consumer safety is the first consideration in glass choice.

The AMA statement expressed concern about the extent of serious injuries resulting from persons walking into non-safety glass in doors and other "hazardous installations." An estimated 100,000 persons are injured in this manner yearly, half of them children.

"From pilot studies made by the Public Health Service and the National Safety Council, it was concluded that these injuries could have been prevented by the use of safety glass," the AMA noted.

"By tempering, glass is made tougher and more flexible than ordinary glass. It does not shatter; it crumbles."

The AMA document explained that in accidents ordinary glass shatters, and splinters can act as knives or daggers, slicing the hands or wrists or cutting vital organs.

The AMA also furnished state medical societies with a model safety glazing bill, drafted by the CGSC, for state legislation. It would require safety glazing for glass applications in commercial, residential and public buildings in such hazardous locations as glass entrance and storm doors, adjacent fixed glazed panels that might be mistaken for doors, sliding doors, and tub and shower enclosures.

The AMA suggested that the medical societies promote the model bill, or similar legislation.

States already having safety glazing requirements are California, Connecticut, Florida, Georgia, Indiana, Kentucky, Maryland, North Carolina, Ohio, Oregon, Washington and Wisconsin. Such legislation is pending in several other states and the District of Columbia.

GP does ENT

The average family physician has a greater work load in otolaryngology than any other category of medical service.

This conclusion is drawn by the American Council of Otolaryngology from findings of four consecutive surveys conducted by the Minnesota Academy of General Practice.

The latest survey, undertaken early this year, covered 27 general practitioners and 5,138 patient visits they made in a five-day work week. It was a computerized study including office, hospital and house visits.

Similar surveys, involving more family physicians in Minnesota, were concluded in 1969, 1968 and 1966. All four studies found that otolaryngology ranked first among 24 categories of patient care. It was the only one of the high volume categories to hold a consistent top ranking.

Licensure: health care personnel

The American Hospital Association called for a nationwide moratorium on licensure of additional categories of health care personnel and encouraged the formation of a national task force to study ways of improving licensure practices.

The holding action should continue until long-range solutions to licensure problems are developed, the AHA said. The American Hospital Association represents more than 7,000 patient care institutions in the United States and Canada.

A statement approved by the AHA Board of Trustees warned that "current trends toward increased licensure of health care personnel forecast possibilities of legal entanglements over occupational entry requirements, scope of functions and flexible use of manpower."

The AHA urged that intermediate measures be taken to alleviate problems of health personnel licensure during the holding action. These would include expanding state medical practice acts to allow physicians broader delegatory power in assigning tasks to allied health care personnel, establishing educational equivalency measures and job performance tests as alternative methods of licensing and providing current health care personnel with continuing education, refresher programs and voluntary review mechanisms.

The complexity of legal control, the AHA said, is increased by the number of occupational groups actively seeking licensure. Licensure has been sought and/or achieved in some states for the following occupations: hospital administrators, inhalation therapists, medical laboratory technologists, occupational therapists, operating room technicians, physical therapy assistants, physician's assistants, psychiatric technicians, radiologic technologists, and social workers.

Family doctor training bill

The House of Representatives approved legislation (December 1, 1970) to increase the number of family doctors in the United States. The vote on H.R. 19599, an amendment to the Public Health Service Act, was 346 to 2.

The bill authorizes appropriation of 425 million dollars over a 5-year period to support training of family doctors in medical schools and hospital residency programs, training of teachers to teach family medicine, and training of paramedical personnel to assist family doctors to treat more patients in their practice.

Passage of the bill by the House followed passage in the Senate last September 14 by a vote of 64-1. It was approved despite opposition that developed because of the bill's insistence that the money be earmarked specifically for family practice education instead of just being made available to medical schools to use as they saw fit.

The legislation was initially sponsored in the House by Rep. Fred Rooney (D-Pa.). It had earlier been sponsored in the Senate by more than 30 veteran lawmakers. The legislation is endorsed by the American Academy of General Practice, national association of family physicians, and a number of other medical organizations, including the American Medical Association. Testimony had been presented in both Houses of Congress by the AAGP, AMA and others.

Welcome New Members

Bruce Miller, M.D.
1000 South 13th Street
Lincoln, Nebraska 68508

James K. Styner, M.D.
1000 South 13th Street
Lincoln, Nebraska 68508

The Rheumatoid Rosette — J. F. Bach, F Delrieu, and F. Delbarre (Hopital Cochin, Paris). Amer J Surg 49:213-222 (Aug) 1970.

Rheumatoid rosettes were obtained in vitro by mixing purified lymphocytes of patients with rheumatoid arthritis and human ORh-erythrocytes coated with rabbit immunoglobulin; 497 rheumatoid rosette tests were performed in 399 subjects. More than six rheumatoid rosettes per 1,000 lymphocytes were found in 70% of 138 patients with rheumatoid arthritis and in 5% of 158 control subjects, excluding gouty patients. No direct correlation was observed between the number of rheumatoid rosettes and the serum titer of the rheumatoid factor, and the proportion of positive test results was not significantly higher in seropositive (76%) than in seronegative cases (64%). A positive rheumatoid rosette test was significantly more frequent in patients with rheumatoid arthritis of recent onset than in those with long-standing rheumatoid arthritis and in patients with pain than in those without pain. A similar correlation was not found with the serum levels of rheumatoid factor. Biologic and clinical data suggest that rheumatoid rosette-forming cells are principally observed at the onset or during the active phase of rheumatoid arthritis, whereas high levels of serum rheumatoid factor are more typical of the chronic phase of the disease. The rheumatoid rosette test is proposed as a new test, unifying seropositive and seronegative rheumatoid arthritis. When this test is combined with the serum agglutination reactions, rheumatoid factor is demonstrated in more than 90% of patients with rheumatoid arthritis.

Changes in Gut Flora Following Cephalexin Treatment — H. Gaya, P. I. Adnitt, and P. Turner (St. Bartholomew's Hosp, London). Brit Med J 3:624 (Sept 12) 1970.

Eighteen patients with urinary tract infection were treated with 0.5 to 1.0 gm cephalexin every six hours for 14 days. Serum and urine cephalexin levels were measured during the second week of treatment. Absorption was variable, the maximum serum level occurring betwen 30 minutes and two hours after administration, and urinary excretion varied between 29% and 89% of the administered dose. Serum cephalexin levels at one hour after 1 gm cephalexin ranged from 1μg/ml to 45μg/ml. A significant number of patients became fecal carriers of *Pseudomonas aeruginosa,* compared with patients on no antibiotic treatment and four cephalexin-treated patients acquired a strain of *Pseudomonas* known to be present in hospital diet kitchen food at that time. Cephalexin treatment may facilitate gut colonization with *Ps aeruginosa.* Furthermore, hospital food may be the source of this organism which is a potential cause of hospital infection.

The Law

Drug bill to president

By a vote of 79-0, the Senate has passed H.R. 14252, the Drug Abuse Education Act of 1970. The bill authorizes the Secretary of HEW to make grants to institutions of higher education, other public or private agencies, institutions, and organizations, for such activities as: (a) curriculum development on the use and abuse of drugs; (b) projects to test curriculum effectiveness; and (c) dissemination of curricular materials to public and private elementary, secondary, and adult education programs. The Secretary could also make grants for preservice and in-service training programs on drug abuse for teachers, counselors, law enforcement officers, and other public service and community leaders. The bill authorizes grants for community education programs on drug abuse which involve parents and others in the community and encourages the use of former drug users as participants in the drug abuse education programs . . . Authorized by the Senate is $5 million for fiscal year 1971, $10 million for fiscal year 1972, and $14 million for fiscal year 1973 to carry on drug abuse education projects. Also specifically authorized is an equal appropriation ($5, $10, and $14 million) for community education projects on drug abuse and drug dependency . . . The bill establishes an interagency Coordinating Council on Drug Abuse Education to advise the Secretary in the coordination of the drug abuse activities of all Federal departments and agencies involved in the field. There is also established an Advisory Council on Drug Abuse Education which would advise the Secretary on the administration of the programs and would evaluate the programs initiated by this bill . . . The House subsequently passed an identical bill, thus clearing the legislation for the President's signature.

Chiropractic services added

The Senate Finance Committee, in Executive Session on H.R. 17550, the Social Security Amendments, included chiropractic services among those medical services covered by Medicare. Chiropractic care would be limited to manipulative services performed by practitioners who met certain educational standards promulgated by the Secretary of HEW. This is the third time the Senate has attempted to add chiropractic services to Medicare . . . The House-passed version calls for a two-year study of chiropractic services.

Catastrophic illness amendment proposed

Senator Long has announced that he would request the Finance Committee to consider an amendment to the Social Security bill, H.R. 17550, which would provide for Catastrophic Illness Insurance . . . Long's proposal would pay for 80 percent of a family's medical costs in excess of $2,000 a year and it would also pay for 80 percent of all hospital costs after the first 60 days of stay in a hospital. He estimates that this program would cost $2.5 billion a year. It would be financed by a one-half of one percent Social Security tax with an equal contribution by the employers and employees . . . Senator Long said that the $2,000 deductible feature would be for families with an income of $8,000 a year or more. For families with a lesser income, the deductible would only be 25 percent of their income.

Occupational health clears house

The House passed H.R. 16785, the Occupational Safety and Health Act of 1970, after substituting an administration amendment which would create a five-member standard setting board and a three-member enforcement board.

Drug bill clears senate

The Senate passed, by a vote of 86-0, S. 3562, the Federal Drug Abuse and Drug Dependence Prevention, Treatment and Rehabilitation Act of 1970, which establishes a National Institute for the Prevention and

Control of Drug Abuse and Drug Dependence. Authorized are formula grants totaling $55 million over the next three years to help state governments develop and administer programs for dealing with drug dependence, and grants totaling $135 million over the next three years to state and local agencies to help finance specific projects. The bill requires that drug dependent Federal employees receive the same employment conditions and benefits as persons who are ill from other causes, and requires Federal agencies to establish programs for dealing with drug dependence among Federal employees . . . The measure also establishes an independent National Advisory Council on Drug Abuse and Drug Dependence and an inter-governmental Coordinating Council on Drug Abuse and Drug Dependence.

House clears family practice grants

The House passed H.R. 19599 which provides assistance for professional and technical training in the field of family medicine . . . The purpose of this bill is to establish training programs at medical schools and teaching hospitals for the training of medical students to serve as family physicians and for the training of auxiliary personnel to aid in the practice of family medicine. The bill also provides grants to public and non-profit medical schools for construction of appropriate facilities for special training programs in family medicine and for financial assistance in the form of scholarships, fellowships or stipends to needy students . . . The bill authorizes $50 million for fiscal 1971, $75 million for fiscal 1972, and $100 million for each of fiscal 1973, 1974, and 1975.

Senate finance tentatively approves PSRO

The Senate Finance Committee released copies of Amendment No. 851 (the Bennett Amendment to H.R. 17550, the Social Security Amendments), as tentatively approved by the Committee . . . The Amendment provides for the creation in areas throughout the country, of Professional Standards Review Organizations (PSRO). A PSRO would be a non-profit professional association (1) (or a component organization thereof) which is composed of physicians engaged in the practice of medicine or surgery; (2) the membership of which includes a substantial proportion of all the practicing physicians in the area; and (3) which has professional competence to review the types and kinds of health care services for which the PSRO would have review responsibilities. If no such organization in the area met these requirements, the Secretary of HEW could designate some other public non-profit, private or other agency or organization which had professional competence and was otherwise suitable to carry out these review activities . . . (It is expected that the Committee Report to accompany the bill will exclude a medical society as a PSRO, but permit the society to be instrumental in establishing such an organization).

Basic duties of the PSRO would be to review professional activities of physicians, other health care practitioners, and institutional providers under medicare and Medicaid. Review would be made to determine whether: (a) the services are or were medically necessary; (b) the quality of the services meets professionally recognized standards; and (c) where services are provided on an inpatient basis, whether they could appropriately and effectively be provided on an out-patient basis or more economically on an inpatient basis in a facility of a different type. The PSRO would have authority, where it elects to do so, to determine in advance whether the above criteria will be met in the case of an elective admission to a hospital or other health care facility, or in the case of any other health care service which will consist of extended or costly courses of treatment . . . The PSRO is directed to encourage all practicing physicians in the area to participate on a rotating basis in the review activities of the organization . . . The Amendment calls for the development of regional norms of care and treatment based upon typical patterns of practice as principal points of evaluation and review. The Secretary is authorized to exclude a practitioner or provider from eligibility to provide services on reimbursable basis under Titles XVIII and XIX, if he determines that the practitioner or provider has failed, in a substantial number of cases to substantially comply with any obligations imposed on him or if he has grossly and flagrantly violated any of these obligations in one or more instances. The Amendment provides for a refund by the practitioner of an amount not in excess of the actual or estimated cost, up to $5,000, of any medically improper or unnecessary services provided . . . The Amendment contains provisions protecting persons serving on PSRO against liability arising out of PSRO activity, and also for immunity to health care practitioners and providers acting in compliance with the professionally accepted norms of care and treatment where due care was exercised.

Eliminated from the bill are earlier provisions as to federal ownership of PSRO records, mandatory pre-admission approval for all cases of elective admissions (and now providing discretion in the PSRO to determine in which instances such approval will be required), provisions for a $5,000 penalty, and creation of national norms of care and treatment . . . Included in the modified Amendment: "No Professional Standards Review Organization shall utilize the services of any individual who is not a physician to make final determinations with respect to the professional conduct of any physician, or any act performed by any physician in the exercise of his profession."

The Letter Box

Dear Dr. Cole:

I always enjoy your editorials. Yours of November, "Watch Us Grow," amuses me particularly. I suggest that you change "Administrative Medicine" to "Administrology" — it sounds more professional!

When people inquire of my specialty and I answer "Administrology," and they reply, "What's that?" — I answer: "Administer means to govern — astrology has to do with the stars — I govern by the stars."

Sincerely,

J. Melvin Boykin, M.D.
Hospital Director, VAH,
Lincoln, Nebraska

Dear Doctor Cole:

I would like to take this opportunity to draw to your attention the availability of the Regional Drug Information Network, a service which is provided for health professions throughout the Region through the Communications Facility of the Nebraska-South Dakota Regional Medical Program.

On August 17 of this year, the Drug Information Network became an operational reality. This program is designed to provide physicians of the Region with comprehensive and authoritative information about pharmacologic products, readily available and requiring a minimal amount of involvement by the requester.

The Drug Information Network's main center is located in Lincoln, Nebraska, and employs a full-time drug information pharmacist. Assisting the center are the services of a clinical pharmacological consultant. There are five subcenters utilized to keep the network operational *24 hours a day and 7 days a week.* These subcenters are located in the pharmacy departments at the University of Nebraska College of Medicine, Omaha, Nebraska; Bryan Memorial Hospital, Lincoln, Nebraska; Mary Lanning Memorial Hospital, Hastings, Nebraska; St. John's McNamara Hospital, Rapid City, South Dakota; and McKennan Hospital in Sioux Falls, South Dakota.

The subcenters have a registered pharmacist with a drug information background answering the after-hours calls (4:00 p.m. to 8:00 a.m. and weekends).

All telephone calls from health practitioners requesting drug information are toll-free (i.e., free of charge to the Requester). The calls are automatically billed to the Regional Medical Program. For example, a physician calling from Chadron for drug information merely dials our number. There is no collect calling or any other similar appartus involved.

A switchboard operator answers every call. She asks who is calling and whether or not the call pertains to drug information. If it does, the operator asks the requester's address and telephone number, as well as his profession. The call is then transferred to a drug information pharmacist who is answering the calls that particular time of day or night. As previously mentioned, the service is available 24 hours a day, 7 days a week.

All phone calls are recorded via a tape recorder and the tapes are transcribed daily for our records. Within 24 hours after a drug information call is received and answered via the telephone, written documentation of the answer is sent to the requester. An evaluation card is also sent so that the requester can evaluate the information obtained.

Physicians in Nebraska use the following number for contacting the Drug Information Network: 800-742-7331. This number is to be dialed directly, preceded by the local dial access number (i.e., Omaha physicians would dial 1-800-742-7331).

We will be expecting to hear from your readers in the future whenever they need comprehensive and authoritative information about pharmacologic products.

Sincerely yours,

Paul E. Groth, Director
Drug Information Service

Announcements

Lectures: internal medicine

The annual "Topics in Internal Medicine" course will be given May 19-21, 1971, at the University of Florida College of Medicine. This program will consist of three days of intensive lectures, seminars and panels on new and controversial areas of internal medicine. For complete information and registration forms please write Mark V. Barrow, M.D., Division of Cardiology, Department of Medicine, College of Medicine, University of Florida, Gainesville, Fla. 32601.

Mediterranean cruise, anyone?

The Department of Postgraduate Medicine of Albany Medical College announces reservations now being accepted for a spring postgraduate medical seminar cruise to the Mediterranean April 30-May 20, 1971.

A 20-day cruise from New York aboard the luxurious and distinguished ship "Raffaello" of the Italian Line.

Ports of call include Casablanca, Naples, Genoa, Cannes, Barcelona and Lisbon.

Faculty of the Albany Medical College will present a comprehensive shipboard postgraduate program, covering subjects in internal medicine, cardiology, obstetrics and gynecology, pathology and surgery.

Request has been made for continuation study credit by the American Academy of General Practice.

For information, write to: William P. Nelson, III, M.D., Department of Postgraduate Medicine, Albany Medical College, Albany, New York 12208.

PD merges with WL

Dr. Austin Smith, Chairman of the Board of Parke, Davis & Company, and Stuart K. Hensley, Board Chairman of Warner-Lambert Pharmaceutical Company, announced completion of the merger of the two companies.

Parke-Davis will operate under its present name and management, with its corporate headquarters in Detroit, as a wholly-owned subsidiary of Warner-Lambert.

Effects of radiation

The National Academy of Sciences - National Research Council invites submission of current data on somatic, genetic, and environmental effects of low-level ionizing radiation, including effects on human growth and development. This material is requested whether or not it has been published. Work in progress which is yet to be reported is of particular interest. The request is made in order to assist an advisory committee of the National Research Council in its deliberations concerning ionizing radiation effects upon human populations. Please send material to the Division of Medical Sciences, Attention: Dr. A. W. Hilberg, National Academy of Sciences, 2101 Constitution Avenue, Washington, D.C. 20418.

Send For It

Film: parkinsonism

A second, new film on parkinsonism has been added to Eaton Laboratories' film library: "Differential Diagnosis of Parkinsonism," by J. Richard Blonsky, M.D., assistant professor of neurology at Northwestern University Medical School. With the aid of volunteer patients, this new film illustrates how to differentiate Parkinson's disease from any other movement disorders. It is 16 mm, full color and sound, with a running time of 14 minutes.

The first film in the Eaton Parkinson Series, "Treatment of Parkinsonism With Levodopa," by George Paulson, M.D., has been widely viewed and it is expected that "Differential Diagnosis . . . " will be equally welcomed by physicians, nurses and students. A third film will be added to the Parkinson series shortly.

These and others in the Eaton library of medical and surgical teaching films may be requested for showings by writing: Film Library, Eaton Laboratories, Division of The Norwich Pharmacal Company, Norwich, New York 13815.

Respiratory Diseases

PROGRESSIVE DISSEMINATED HISTOPLASMOSIS AS SEEN IN ADULTS

> Once local host resistance is overcome, hematogenous dissemination of the histoplasma spores may occur. Amphotericin B provides the most effective means of combating the infection. Most properly managed patients can tolerate this drug even for prolonged periods.

In the present review, case records of 530 adult patients with diagnosed histoplasmosis over a 13-year period (1955-1968) were studied for the dual purpose of ascertaining the extent of progressive disseminated disease and the therapeutic efficacy of amphotericin B.

Twenty-five patients from 16 to 75 years of age were found to have progressive disseminated histoplasmosis. The largest number (8, or 32%) were within the sixth decade of life. Males predominated (12.5:1). One patient was a Negro; 24 were white.

Fifteen (60%) of the group were farmers or lived on farms for many years. One patient developed symptoms within three months after becoming a driver of manure-hauling equipment. One patient owned a pet shop.

The commonest symptoms in the group included fever, cough, dyspnea, fatigue, weakness, anorexia, and weight loss.

The demonstration of **H. capsulatum** was the most important criterion for inclusion in the study. This was achieved by differential staining of the tissue sections with methenamine silver stain as modified by Gomori.

In the encapsulated lesions the organisms were usually found in great numbers in the centers where recent caseation had developed. In the tissue, the intracellular organisms appeared as small or oval yeast-like bodies, measuring from 1 to 5 μ. Extracellular forms as large as 10 to 15 μ were also noted in the necrotic tissues.

Additional confirmation was obtained by isolation and identification of the organism from tissue cultures. Animal inoculation and pathogenicity studies were also performed in a few isolates. Dissemination of the disease was presumed when more than one organ was found to be involved.

Most investigators believe that the natural route of histoplasmosis is through the respiratory tract by inhalation of spores. In at least one of five patients with gastrointestinal involvement in the present study, however, spores appear to have gained entry through the gastrointestinal tract. While widespread involvement of the peritoneum, the mesenteric glands, spleen, and adrenals was found at necropsy, extensive search of the lungs and chest x-ray failed to reveal active or healed lesions.

More characteristically, 19 of the 24 patients tested had positive sputum cultures for **H. capsulatum.** Roentgenograms of the chest varied: two patients had no evidence of pulmonary disease, active or healed; five had diffuse calcified lesions; one showed miliary calcification; 11 had cavitary lesions, and six had pulmonary infiltration without cavitation.

Whichever the portal of entry, once the local host resistance is overcome, hematogenous dissemination may occur.

Five patients, for example, with typical histoplasmosis in the oral cavity were later found to have disseminated disease to other organs. One of these patients, hospitalized for histoplasmosis of the palate and larynx, was found to have disseminated disease of the ileum on operation for acute intestinal obstruction. The constricting lesion was positive **H. capsulatum** on stain and tissue culture. He improved with amphotericin B and is well three years after treatment.

Oral lesions of histoplasmosis may mimic tuberculosis, syphilis, Hodgkin's disease, and other lymphomas, Vincent's, and other fungal infections. Biopsy for demonstration of the specific organism should be undertaken in all suspicious lesions.

It is not generally appreciated that histoplasmosis, both in its acute and chronic stages, can involve the heart and great vessels. One case of pericardial effusion due to histoplasmosis in one of the study patients was reported earlier (1961). A second patient in this series had possible pericardial involvement as well.

Six patients had positive urine cultures for **H. capsulatum,** and four of these patients had azotemia (with blood urea nitrogen levels > 25 mg per 100 cc) prior to therapy.

However, on necropsy only one patient was found to have renal involvement. This suggests that patients with extrarenal histoplasmosis without renal disease pass **H. capsulatum** in urine.

In the one patient with renal disease, lesions were bilateral and there were several small foci localized mainly to the glomeruli and tubules in the cortex. **H. capsulatum** were also isolated from the liver, spleen, and adrenal glands of this patient.

Another patient had vesical and prostatic involvement. Grossly, the bladder was rough, thick-walled, with multiple ulcerations. Microscopic examination demonstrated **H. capsulatum.** Tissue cultures of the bladder and prostate, also the adrenals and lungs, were positive.

Other areas of involvement included the liver (in two patients), the spleen (in six), the adrenal glands (in eight), the skin (in two).

Lymph nodes are frequently involved in the inflammatory process of this disease. Extrathoracic lymph-node involvement may result from generalized dissemination via the blood or lymph stream. Regional nodes into which an infected organ drains may also become infected.

In the present review, 17 cases of extrathoracic lymph-node involvement was demonstrated, including four cases of involvement of the mesenteric nodes, five of the scalene nodes, two of the cervical nodes, four of the inguinal nodes, and two of the submandibular nodes.

Blood cultures were positive in 13 of 22 and bone marrow cultures in 15 of 23 patients. Since all histoplasmosis in the study was found to be disseminated through the blood stream; negative cultures probably mean that at the time of testing there were no circulating organisms.

TREATMENT

Amphotericin B has been found to be the most effective drug in the treatment of histoplasmosis when adequately employed. Adequate treatment consists of 1 mg dose per kg of body weight per day, or a total dose of 40 to 50 mg per day, injected intravenously three times weekly after a gradual buildup from a low initial dosage of 10 to 20 mg per day.

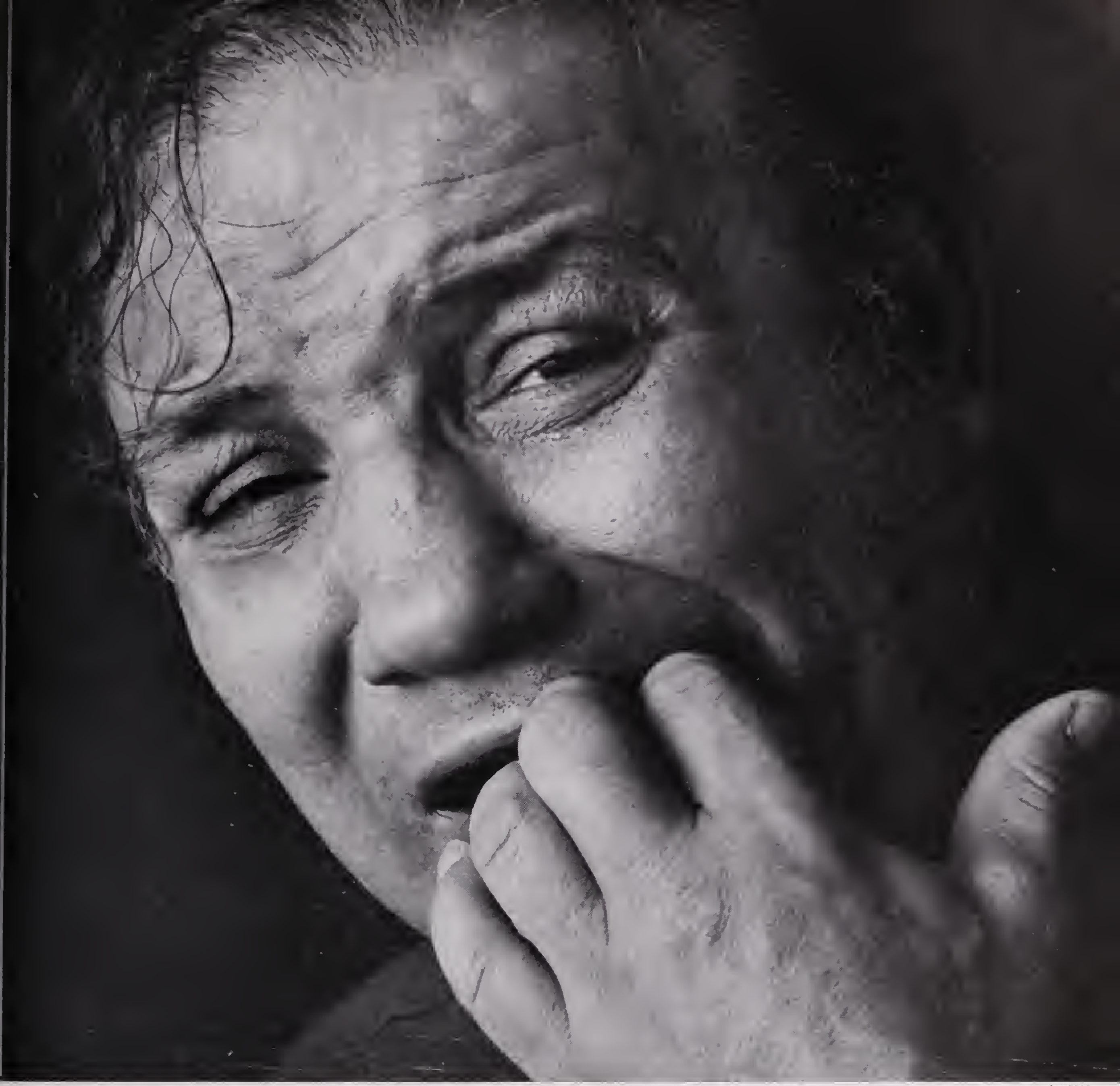
Of the 14 patients with disseminated histoplasmosis who had received adequate treatment over the past 11 years, only one (7%) has died from histoplasmosis. In contrast, all three patients (100%) who did not receive amphotericin B died from it.

With proper management most patients can tolerate the drug, even for prolonged periods. Minimum adequate coverage for active histoplasmosis was found to be a total dose of 25 mg per kg. Higher total dosages (40 to 50 mg per kg) are recommended for more serious forms of the disease.

—Prathapchandra Reddy, M.D.; David F. Gorelick, M.D.; Charles A. Brasher, M.D.; Howard Larsh, Ph.D. The American Journal of Medicine, May, 1970 (Vol. 48).

Perforating Wounds of Heart Caused by Central Venous Catheters — C. T. Fitts et al (80 Barre St, Charleston, SC 29401). J Trauma 10:764-769 (Sept) 1970.

In a relatively short period of time four cases of perforation of the heart by indwelling central venous polyethylene catheters have occurred in one institution. All resulted in death, three due to pericardial tamponade. Warnings concerning intracardiac placement are conspicuously absent. It is worthy of note that the perforation apparently occurs slowly. Tamponade appeared from six hours to eight days following the placement of the catheter in these and the previously reported patients, and in each case the volumes of fluid which had been administered through the cannula made it evident that the perforation did not occur at the time of placement.



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Survival Rates of Patients Treated by Home and Hospital Dialysis and Cadaveric Renal Transplantation — J. F. Moorhead et al (Royal Free Hosp, London). Brit Med J 4:83-84 (Oct 10) 1970.

A study of the survival rate of 109 patients admitted to the Renal Failure Program of the Royal Free Hospital has been carried out over the past seven years. The renal failure program largely consists of training for home dialysis but includes patients who have been treated by hospital dialysis and transplantation. The overall seven-year survival rate was 80.7% (SE 4.9%). Home dialysis has been carried out for six years, and the survival rate for this period for home dialysis patients alone is 86.2% (SE 6.6%). The short-term survival of all patients was 96.3% (SE 1.8%) for six months, and 94.4% (SE 2.2%) at 12 months. The survival rate is in excess of that anticipated. A large increase in the rate of patient acceptance and successful transplantation would be required to approach a state of equilibrium between acceptance and loss in this program.

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NEBRASKA STATE MEDICAL ASSOCIATION

Councilor Districts and Component County Medical Societies

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Prolapse of Umbilical Cord — E. W. Savage, S. G. Kohl, and R. W. Wynn (Univ of Illinois, PO 6998, Chicago 60680). Obstet Gynec 36:502-509 (Oct) 1970.

Data from 516 cases of prolapse of the umbilical cord occurring in 83,624 deliveries were obtained from IBM punch cards. The incidence was higher in abnormal presentations, particularly transverse lie (7.1%) and breech (6.6%). The gross perinatal mortality was 38.1%; for term infants the figure was 17.6%. Prolapse of the cord was significantly higher in women over 30 years of age. One hundred and forty-seven cesarean sections (28.5%) were performed. The gross perinatal mortality rate was 14.9%; the figure corrected for fetuses over 2,500 gm and alive on admittance was 11.4%. Frequent examinations during labor aid in early detection of the complication. When vaginal delivery is not immediately feasible, more liberal use of cesarean section will increase the salvage of infants over 2,000 gm with prolapsed cord.

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3/26/68
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6/11/68
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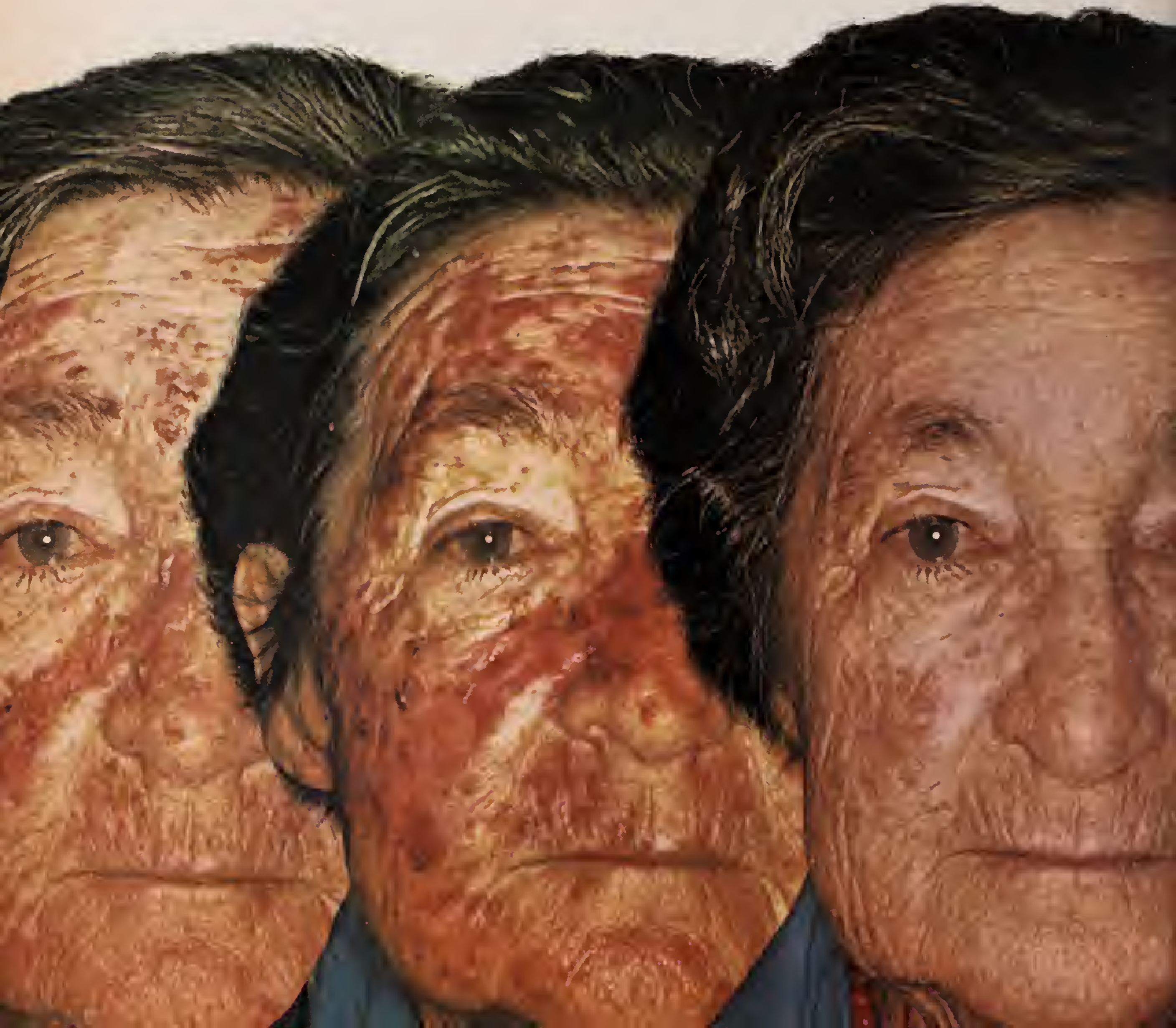

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Indications: Multiple actinic or solar keratoses.

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Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

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CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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Multiple Sclerosis: Twenty Years on Low-Fat Diet — R. L. Swank (3181 SW Sam Jackson Park Rd, Portland, Ore 97208). Arch Neurol 23:460-474 (Nov) 1970.

One hundred and forty-six patients with multiple sclerosis were placed on a low-fat diet and followed an average of 17.1 years. The course of disease in these patients was less rapidly progressive than in untreated cases taken from the literature for comparison. There occurred a significant reduction in death rate, in the frequency and severity of exacerbations, and in the rate at which patients became unable to walk and work. If treated early in the disease before significant disability had developed, a high percentage of cases remained unchanged for up to 20 years. When treated later in disease, the disease usually continued to be slowly progressive. Patients who consumed the least amount of fat and largest amount of fluid oils deteriorated less than those who consumed more fat.

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Dosage and Administration: One or two tablets daily, as indicated by clinical need.

How Supplied: Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.

References:
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc., 94:* 81, 1969.
2. Cotzias, G. C.: *J.A.M.A., 210:*1255, 1969.

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Combined Visceral and Vertebral Injuries From Lap-Type Seat Belts — W. P. Ritchie, Jr., et al (Univ of Minnesota Medical School, Minneapolis 55414). Surg Gynec Obstet 131:431-435 (Sept) 1970.

Four members of a family sustained lap-type seat belt injuries in a single accident. Two of the victims sustained visceral lacerations and simultaneous transverse lumbar fractures. The third victim sustained an intra-abdominal injury consisting of complete transection of the small intestine in two adjacent areas. The fourth sustained a lumbar vertebral injury only. The lumbar fractures were of a peculiar type, presumably resulting from hyperflexion of the entire vertebral column about the belt, and resulted in a disruption of the posterior bony and ligamentous elements of the lumbar spine with extension to adjacent bony parts but without displacement or compression of the vertebral body. The resultant instability required fusion in two patients. Laparotomy was required in three of the victims but was delayed for more than 36 hours in two. All of the patients recovered. Both delay in laparotomy and the inadvertent production of paraplegia can be avoided by recognizing that the two classical components of lap belt injury may be present concomitantly. Abdominal ecchymosis, signs of peritoneal irritation, even though minimal, and back pain should alert the attending physician to this combination.

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Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

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THE NEBRASKA STATE MEDICAL JOURNAL

GREEN TUMORS AND BERRY ANEURYSMS

If you ran across something called the Green Tumor, you might, being curious, even as I, wonder if the swelling looks green, or if Doctor Green discovered it. The Brown Mixture is simply a brown mixture; there was no cough-stopping Doctor Brown. There's a Rose Oil without the benefit of Doctor Rose, and a White Ointment that Doctor White didn't invent. I have known Doctor White, Doctor Brown, Doctor Green, Doctor Black, and Doctor Rose, and I am sure of my facts.

So I got to wondering about the Berry Aneurysm. Does it look like a berry, or did Doctor Berry tell us about it?

This is from Cecil-Loeb Textbook of Medicine, edited by Beeson and McDermott, 12th edition, page 1565.

> "These are small, round or saccular, berry-shaped dilatations that form characteristically at arterial bifurcations at or near the circle of Willis."

And this unsettling reference is from Current Diagnosis and Treatment, edited by Brainerd, Krupp, Chatton, and Margen, 1970, page 497.

> Berry, R. C.; Alpers, B. J.; and White, J. C.: The site, structure and frequency of intracranial aneurysms, angiomas and arteriovenous malformations. Res Publ A Nerv Ment Dis 61:40-72, 1966.

So ends my annual essay on intracranial aneurysms, and on a note of triumph.

—F.C.

WHERE ARE ALL THE DOCTORS?

There are about three hundred thousand physicians in the United States (338,379 in 1969, not counting 3,784 with temporary foreign addresses), with a population of approximately 200 million. Some of them (324,942) write M.D. after their names; some (13,437) are osteopathic physicians. Some are active, some inactive. The doctors of medicine are divided into 20 recognized specialties. Some of the specialists, and remember, we are all specialists now, are American Board Diplomates, and some are not. In addition to this, I have been able to count more than 50 other specialties to which doctors of medicine limit their practices, including aviation medicine, oncology, and maxillofacial surgery.

Let's start again. There are doctors (29,464 MDs) in governmental practice, there are doctors who write; and there are of course doctors who never see patients, but who are nevertheless active in their chosen fields. There are doctors who practice, full-time, on salary, at community hospitals; and most doctors, I assume, practice on a fee-for-service basis. Then there are those in group practice and there are the soloists. There are the doctors who do not leave research centers, and without them medical progress would not exist. And there are the many who complete their training and spend their lives in private practice.

I liken the physician in research to a member of the Congress, and the practicing physician to the policeman, the man on the beat. The first invents rules that must be followed for the good of the citizen-patient, and the second carries them out. Without the research physician, we should not know what to do, and without the doctor in practice, nothing would be done.

Some doctors are interns and some are completing residency training; more than 45 thousand doctors of medicine are in training programs. Some carry on private practice, while maintaining a part-time university connection. And some settle in small towns, and others in populous areas.

With this outline, it should be easy, or at least possible, for every doctor to find his little niche, and to wonder how many others occupy his subdivision.

If there is a shortage of doctors, it is not confined to small towns, nor to this country. If there are too few family practitioners, it is not peculiar to the United States. These choices are determined by a kind of natural selection. A doctor who likes general practice will not willingly become a plastic surgeon; one who prefers rehabilitation to everything else medical will not happily bring himself to delivering babies, nor is the proctologist likely to practice his specialty in a town with a population of only five hundred. About 20 thousand doctors are retired, and two thousand are listed as address unknown.

Chiefly, I suppose, there are the family practitioner and the one who specializes in other things; there are the research physician and the one in private practice; and there are the male physician and the female one. But the 300,000 of us are easily divided into a hundred specialties, each of which is partitioned into at least twelve groupings: federal and nonfederal, retired and active, urban and rural, research and practice, solo and group, and M.D. and D.O. One day we may have as many kinds of doctors as there are doctors, or a specialty without a specialist, like the story of the physician who could perform an operation that nobody else could do, and who left no successor when he died.

If there are too few doctors, and we have one for every 650 people, or more than 150 doctors for every hundred thousand people, are there too many kinds of doctors? Probably not; this has all come about naturally. When you want a family practitioner, you do not look for a radiologist, and if you have a brain tumor, a generalist (I like that word) is not likely to remove it.

—F.C.

WHERE'S THE TIBIAL TUBERCLE?

Gray says the intercondyloid eminence, the spine of the tibia, is surmounted on either side by a prominent tubercle. Dorland states that the tubercle of the tibia is the eminentia intercondylaris. Spalteholz says the eminentia intercondyloidea, O.T. spinous process, ends in two small spurs, the medial tuberculum intercondyloideum and the lateral one. Their Latin is as good as their anatomy.

Turek and Gartland say that there are pain, swelling, and tenderness about the tibial tubercle in Osgood-Schlatter disease. But where is the tibial tubercle?

According to Gray, there are two on top of each tibia, one on each side of the eminence or spine. Dorland says the eminence *is* the tubercle. Spalteholz says the spinous process ends in two tubercles.

But when orthopedists say tubercle, they mean the tuberosity. The tuberosity, however, is in the front, nowhere the tubercle.

I must admit that Spalteholz also says that at the upper end of the crista anterior a rough, broad projecting spur is visible (O.T. tubercle), but if it was old terminology in Spalteholz's day, it is defunct now. The new nomenclature was adopted in 1895.

Anyway, Gray doesn't call the tuberosity the tubercle, and if you look up the tibial tubercle in the dictionary, you'll find it's not where the surgeons say it is.

—F.C.

ON MEETINGS

Some years ago, we wanted to have a meeting for the sole purpose of voting on a single issue. It meant driving many miles, a 6 o'clock social hour, 7 o'clock dinner, the vote, driving home, and a lost evening. So we met by telephone instead and settled the whole thing in three minutes.

Today we drive or ride or fly thousands of miles and spend hundreds of dollars and crowd dozens of hotels to listen to lectures that are going to be published anyway, and usually in journals to which we subscribe. And the author will send you a reprint.

I predict, with all the ease of a man who will not be there to see, that in the future, the speaker will stay home and so will his audience. You do not have to see the lecturer to hear him. And now, with telephones that let you see, and with closed-circuit television, staying home may be better than going there. Anyway, you can always read the article, and cut it out or get a reprint.

The only thing is that, for a doctor, there's nothing like getting out of town, and a meeting is as good an excuse as any.

—F.C.

Experiences with Air Embolism*

W. J. KOLFF, M.D., Ph.D.

MY first personal experience with air embolism happened when I was a medical student. During clerkship in neurology, a resident, Dr. Kastein felt that it would be a good experience for me to be subjected to vena puncture. I agreed that one should feel what one does to others and submitted. While he had the needle in my vein, Dr. Kastein said that small amounts of air did no harm. To prove the point, he injected what was probably about 1 cc of air in my vein. I felt nothing unusual, but protested. It is true that small amounts of air can be caught in the lung arterioles without causing any symptoms, but some people have an opening in the septum between the right and left atrium. Under certain circumstances, a cross embolus can occur when the air moves from the right to the left atrium and a small amount of air in the brain arterioles is something quite different. One should never perform an act of bravura or do a useless experiment when it involves even the slightest risk. Dr. Kastein became one of the leaders of the Dutch Underground during the German occupation in the years of World War II. When the Sicherheits Polizei closed in on him, he jumped through a tenth floor window, glass and all to his death.

My next personal experience with air embolism was a few years later. I had set up a blood bank in the Hague and one in Groningen. During the war, rubber stoppers and ordinary material were hard to find. The opening in the transfusion bottles was closed off with cotton, and occasionally, the cotton stoppers became wet during sterilization. When the blood from a donor filled the bottle, the air could not escape and pressure built up in the collecting bottle. When the flow became less and finally stopped, I made the usual mistake. I thought that perhaps the tourniquet around the donor's arm was too tight and I loosened it. The pressurized air from the collecting bottle immediately rushed through the tube and the needle, into the donor's vein. She immediately became blue and had a severe coughing spell. But after 15 minutes, everything subsided and she went home never knowing what had happened. Even a fair amount of air fortunately, is not always deadly.

Most commonly, air emboli occur because there is a need for rapid transfusion of blood or infusion of solutions. The need is most likely to occur during operations and quite often, air is pumped into the transfusion or infusion bottles to accelerate the flow. If the attention of the physician or nurse in charge of this bottle is diverted, as is likely when the patient is in trouble, a large amount of air may enter the patient's vascular system. Initially the blood level in the bottle falls very slowly. It goes much faster when it begins to descend in the tube. The largest acceleration takes place when the air passes through the narrowest part of the line which may be a screw clamp or the needle in the vein. The narrow point offers a certain resistance to blood, but the resistance to air is very much less and therefore the air rushes in at a greatly accelerated speed. Many deaths have occurred all over the country as a result of the practice of pumping compressed air in a blood or infusion bottle. The Department of Anesthesia in the hospital where I worked had a float in the drip chamber. Air would cause the float to close off the outflow. It was not always effective.

During regional heparinization, one infuses heparin into the arterial line and protamine sulphate in the venous line of an artificial kidney. The pressure on the arterial inflow line may be considerable, and it becomes impractical to give a continuous drip of heparin into the arterial line when this is propelled by gravity only. Many years ago, we hooked up bottles in tandem and we applied gas pressure to the first bottle only.

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*This article has also been accepted for publication in the Journal of the American Society for Extracorporeal Technology.

The rule was that the second bottle should always be filled. To further decrease the danger, we used compressed CO_2 rather than air because CO_2, in case of an embolism, can be adsorbed much more rapidly. One night the resident on call, realizing that heparin was expensive, thought that this extra bottle was a waste of money and eliminated it. During the small hours of the morning, the heparin bottle ran out and the CO_2 under pressure rushed up, partly toward the artificial kidney, but much more seriously, it ran up against the stream into the patient's artery. What happened was described as a convulsion and the patient died instantly. I arrived 20 minutes later, and it was not hard to reconstruct what had happened. The right arm was practically bloodless, the blood having been replaced by the CO_2. From that date on, we made a rule that under no condition were we to allow gas under pressure to be pumped in a bottle that is connected to the vascular system of the patient.

In our dialysis patients, we go through the trouble of transferring infusion fluids into plastic bags. These plastic bags can then be compressed by air on the outside. Since there is no air in the plastic bag, air embolism cannot occur. I have been told that in Canada, one can buy IV solutions in plastic bags. Is it the glass lobby that made their sale illegal in the United States? If so, we need an anti-lobby.

Air emboli of a different nature can come from bubble oxygenators. These emboli are so small that they can usually not be seen and most surgeons get away with the use of bubble oxygenators without much trouble. However, it is not certain that the patients always get away with them. We are all familiar with the mental changes that sometime occur in patients after open-heart surgery. Loss of memory may be transient, but not always. I know of a case where a patient's memory was wiped out forever. Most enlightening, but also most disturbing is the study performed by Dr. Simmons presented at the meeting of the AAMI and at the American Society for Extracorporeal Technology in 1970. He first opened the skull of dogs and then treated them with conventional pump oxygenators. During the run, air could quite clearly be recognized in the small vessels of the brain.

One might ask why air in the brain has so rarely been recognized at autopsy. The answer is that its presence is very difficult to prove. When the skull is opened and the skull cap is removed, suction nearly always occurs and air will then enter through the cuts in the vessels of the cadaver. Therefore, air in the blood vessels in the brain is a common finding at autopsy, but it is an artifact. Even when the skull is opened under saline, the fact that the air or gas was there when the patient was still alive is hard to prove.

Pump oxygenators are of course not the only source of air emboli during open-heart surgery. Many times air is trapped in the heart cavity. I believe that it is wise to flush the open chest with CO_2, during the time that the heart is open. Any gas entrapped would be, at least to a certain extent, CO_2. If anybody doubts the possibility of keeping CO_2 in an open well, place a burning candle in the bottom of a pail, with a tube releasing CO_2 at the rim of the pail. The CO_2, being heavier than air, will sink to the bottom of the pail and extinguish the candle. To convince our surgical friends that it would be worthwhile to flush the chest cavity with CO_2, we actually carried the burning candle in the pail into their office and convinced them with the experiment. However, after a while, they became annoyed with the extra tube on the chest wall and abandoned the practice. Fortunately, most air can be removed from the heart cavity and from the aorta by puncturing at the highest point. Air is quite often seen in the coronary arteries during open heart surgery. I believe that the best thing to do then is to continue perfusion with sufficient pressure head. The air will finally migrate through the coronary arteries and no lasting damage is done.

Whenever a pump is used in a system, there is a possibility that the pump creates sub-atmospheric pressure and that air enters the system through a small needle hole or junction. If the vacuum is low enough, degassing of the blood will take place which will create enough gas to cause embolism.

Air Emboli During Hemodialysis

During treatment with the artificial kidney, air emboli can originate from:

1. IV bottles, either on the arterial or the venous side.
2. Heparin or protamine sulphate administration.
3. It can be sucked into a system whenever a pump is used.
4. Air can lodge inside an artificial kidney when it is not properly flushed.
5. During removal of blood from either a Kiil or a coil kidney, some people use air to displace the blood. It is dangerous, particularly when that air is pumped in.

Notwithstanding these possibilities, air emboli were relatively rare until recently. AV fistulas increased the risk of air embolism.

AV fistulas are a great improvement for many patients. A blood pump is usually needed. And to get enough flow, the blood pump must actually suck. If the blood flow through the needle or cannula suddenly stops, a fairly high vacuum can be created, which may aspirate air. This air can be pumped all the way through the kidney until it fills the bubble trap and if it is not detected, it will continue its way through the venous return line to the patient. The flow is slow until the last obstructing narrow spot in the line is reached and then the air rushes in. Without sending out questionnaires, or talking to a large number of our colleagues, we have heard of five fatal air emboli and quite a few near misses. The air may either enter in small quantities mixed with blood over some time, or it may rush in in a large volume all at once. When that happens, it is likely that the patient experiences acute distress. He may become blue, have air hunger, cough, vomit, have severe pain in his head and back or chest or he may convulse. The picture may be most alarming, which indeed it is. The family in attendance may rush to the aid of the patient, one holding his head, somebody rubbing his back, or rushing for a basin so he won't vomit all over the bed. In the meantime, chances are that air goes undetected and continues to be pumped into the patient.

We use many fistulas and hope to continue to use them, but we insist that our patients be protected by an air bubble detector in the blood flow line from the kidney to the patient. When an air bubble is detected, the venous return line is immediately clamped, the blood pump is stopped, a light blinks and an alarm sounds.

The work at the Division of Artificial Organs of the Department of Surgery of the University of Utah, Salt Lake City, is being supported by The John A. Hartford Foundation, the Fleischmann Foundation, the Christian Foundation, the Lad L. and Mary Hercik Fund, Rotary Club of Salt Lake City, The National Institutes of Health via the National Heart Institute grants numbers HE 12727, HE 12725, contract number NIH 69-2181 National Institute of Arthritis and Metabolic Disease contract Number PH-43-68-1027, and the Chronic Kidney Disease Control Center PH 86-67-232.

Medical Students as "Probation Officers" For Juvenile Offenders

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IN early March of 1969, freshman and sophomore medical students at Creighton University began working with the Juvenile Court of Douglas County as Volunteer Probation Officers in an effort to broaden their own understanding of the legal processes of the juvenile court system and of the problems of the juvenile offender, who appears to be an ever-increasing component of our problem-plagued society.

The group with which the Honorable Seward L. Hart wanted the students to work were the drug abusers, children with psychiatric problems, mental retardation, severe catastrophic illness within the family, and severely disrupted family situations. Generally, these children were considered to be problem cases, due to the constant psychologic or sociologic pressures which tended to make their efforts to adjust in society during their adolescent period seemingly futile; they were not, however, considered chronic delinquents with gross sociopathic tendencies. They came from a cross-section of the socio-economic-educational scale ranging from upper middle class homes to homes in ghetto areas, homes with both parents, but in which either or both parents were not functioning, or from broken homes. (Both men and women students were involved in the project, but since there were at that time only five women enrolled in the school of medicine, the probationers were not assigned on the basis of sex).

The medical students had varying backgrounds ranging from one who had previously worked as a probation officer within the juvenile court systems of Los Angeles, to those who had experience as college residence hall counselors, and those who had virtually no experience in any area relevant to juvenile delinquency save that they too had once been adolescents. Through the Department of Preventive Medicine at Creighton University, arrangements were made for these students to select and meet their individual probationers. In one instance, 11 of the students belonged to the same fraternity; the distribution of cases was made at their chapter house, with each student selecting the individual with whom he wished to work from a group of about 20 case reports. The students discussed the cases among themselves, and several swaps were made before the probationers were finally assigned to their volunteers. It seemed at this time, though it is difficult to document, that those medical students who were most self-assured tended to take responsibility for older children, while those with less experience seemed to select younger children.

The orientation was extremely brief, involving a session with the chief probation officer concerning only the essential duties of the probation officer, directions concerning the filing of reports with the court, and information concerning persons at the juvenile court to call when and if difficulties arose. Without any restrictions whatsoever placed upon their methods, the students then proceeded to use whatever means they were able to muster to prevent their probationers from having another brush with the authorities and to provide counseling experience of a helpful nature. The initial meeting with a probationer was to include his parents, following which visits were made in a variety of places, such as the University swimming pool, basketball courts, and a local "hippie" hangout. Most visits were made, however, either in the child's or the probation officer's home. The volunteer officers were supposed to spend at least one hour per week with their probationers, but this often spiraled to several hours per week. The students were assigned only one child initially, but during the summer vacation, several members of the class of 1971 who remained in Omaha for summer clerkships were asked to assume responsibility for more than one child and in some cases as many as four.

At the present time, most of the children have successfully completed their probations with the help of the medical students and subjectively, from the viewpoint of the Juvenile Court, the results have been outstanding; but it is much too early to make a judgment concerning the far-reaching effects of the association between medical student and probationer in terms of the child's eventual life patterns. What has been ascertained, however, is the response of the freshman and sophomore medical students to the program.

Reaction of the medical students to the project was evaluated by means of a brief questionnaire which was sent to the 18 students involved in the project and returned by twelve (66%). They were not personally identified on the questionnaire. The questions revolved around the relevance of the program to the student's education, how he dealt with the probationer, and his evaluation of the probationer's progress and social background.

We believe it significant that 100 percent of the returned questionnaires recorded the experience as *valuable*, that 84 percent felt that it was a definite adjunct to the educational process of a physician, and that 100 percent recommended the program to other medical students. Many students expressed feelings of inadequate training for such a project, but on the questionnaires reported that from the standpoint of their backgrounds, they felt partially (33.3%) to moderately successful (42%). None reported failure while three students (25%) felt that they were highly successful.

In contradistinction to the evaluation of their own efforts, 25 percent felt that in terms of the probationer they had failed. The majority felt that they were partially to moderately successful (68%) and 16 percent expressed feelings of being extremely successful. The students felt that they were accepted by the probationer's parents in 84 percent of the cases, and further stated that family conditions appeared good in 50 percent of the homes. The adequacy of the physical surroundings was generally rated as being poor (58%), with an indifference or apparently outright poor attitude towards cleanliness in the home in the majority (58%). In all cases but one (8%), the parents were considered subjectively by the student to have significant personal problems grossly reflected in the child's behavior which led to his subsquent referral to the juvenile authorities.

Many probationers smoked (66%); used drugs (42%), alcohol (42%), or each in one case. All of the probationers who were not in school at the time of assignments to a medical student were helped to return to school. The students felt that the probationer could have profited from consultation with a psychiatrist in 42 percent of the cases, and one (8%) was actually under psychiatric care, as were the parents in five cases. Twenty-five percent of the probationers had verbalized thoughts of suicide to the student volunteer, and one had attempted suicide on two occasions. Although the probationers received far more personal attention and concern for their problems under this program than they ever could have received from a professional probation officer with a large case load, 40 percent of the medical students felt that more time spent with the child would have improved the eventual outcome. In all cases, the students personally liked their probationers.

The volunteers generally felt that they had had adequate supervision (66%) and sufficient background material (66%) to perform the task at hand. The road was not smooth, and all of the medical students stated that at some time in the program they felt like "throwing the towel in." The rather strict rules of probation as defined by the Juvenile Court were modified by the volunteers in 83 percent of the cases with the most frequent modifications being those of liberalizing curfews and allowing smoking, though the health hazard was always clearly called to the probationer's attention.

It is significant that almost every child in the program was under a serious threat from the court to be sent to the state reformatory, and that none were sent. We believe that this fact and the subjective evaluation of the court of the success of the program, which was regarded as outstanding, speak for the value of the program to the probationer and to society.

This type of program can be readily developed at any medical school, and will be greatly facilitated when the juvenile court judge is willing to improvise in his probation system by accepting nonprofessional medical students as "probation officers." The educational impact for our new generation of altruistic and patient-centered students should be rewarding.

Summary

A program is described in which medical students from Creighton University worked as Volunteer Probation Officers for the Juvenile Court of Douglas County, Nebraska. We have shown that this program is valuable from the standpoint of society and the court. We believe that if such a volunteer program exists in the county where a medical school is located, students with an interest in this field will profit through participation in it.

Antimicrobial Therapy in Pediatrics: A Brief Review of Basic Principles

MILTON O. KEPLER, M.D.*

THE antimicrobial drugs are an invaluable part of the therapeutic arsenal and are drugs that may be used less rationally and more emotionally than any other. New antimicrobials are introduced from time to time, and new information as to the use of dangers of the older ones constantly appear. For the above reasons, a brief review of the basic principles for optimal usage of these agents may be helpful.

PART I
REVIEW OF BASIC PRINCIPLES

The drug must be used against susceptible infections.

There is still no successful systemic antiviral drug. Amantadine has been used investigationally, and may offer some limited use against certain viral infections. A few of the large viruses and some rickettsia may succumb to certain antimicrobials. Mycoplasma infections are rare in children and there are no valid studies to show effectiveness of any antimicrobial against this organism at this age. Unwarranted use against unsusceptible infections needlessly subjects the patient to the dangers of sensitivity phenomena, metabolic disturbances (as direct toxicity) and emergence of resistant bacteria (superinfection).

A fever of undetermined origin (F.U.O.) is not an indication for an antimicrobial: Most acute FUOs are caused by viruses — which are unsusceptible as described above. Younger children are more apt to have fever — sometimes quite high — with a viral infection. Chronic FUOs (more than one week) are more often caused by tuberculosis or subacute bacterial endocarditis. Collagen diseases and neoplasms also may cause chronic fevers. To use antimicrobials for F.U.O. may produce one or more of the following undesirable reactions:

Drug reaction
Delay in specific therapy
Superinfection
Masking of underlying disease causing a dangerous delay in specific therapy.

The probable cause of a fever should be carefully considered before using antimicrobials.

The drug must be used in proper dosage, in proper form, and for adequate duration. Neonates are especially liable to toxicity from overdosage and proper dosage of antimicrobials in this age group is commonly ⅓ to ¼ the usual dose-for-weight in the older child. The package information leaflet (insert) should be carefully checked.

Respository forms, such as benzathine penicillin, should not be used in infants, and procaine penicillin should not be used for treatment of serious infections in infants. If procaine penicillin is used, it should be fortified with penicillin G. Crystalline Penicillin G given intramuscularly every 12 hours is adequate in the neonatal period for all susceptible infections because the immature kidneys excrete it much more slowly. Long-acting sulfonamides should be avoided, because of increased toxicity in young children resulting from prolonged high blood levels.

The antimicrobial agent must be used for several days after apparent clinical recovery. Use of the *macrolide* antibiotics (novobiocin, oleandomycin, and to some degree, erythromycin) for more than 2 weeks may produce hepatitis, and should not be used for longer periods unless absolutely necessary. Group A streptococcal infections require a minimum of 10 days treatment with appropriate agents, usually penicillin G or erythromycin.

Prophylactic use of antimicrobials. The correct principle of antimicrobial prophylaxis may be simply stated:

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Direct the prophylaxis against (usually) a single organism by a single agent. Examples: Penicillin G against streptococcus infection to prevent exacerbation of rheumatic fever, or sulfonamides to protect against meningococcus, chloraquine to prevent malaria, etc. It is impossible to prevent all microbial infection, and attempts to do this have caused disaster. Antimicrobials given after clean surgery have caused overwhelming and resistant infections.

Antimicrobial Combinations: Use of fixed combinations in therapy is generally unwise for at least 3 reasons:

a. The fixed combination is almost always deficient in the proper dose of one of the agents and

b. There are only a few conditions in which combination therapy may be superior to a single agent. Some of these include:
    (1) Tuberculosis
    (2) Subacute bacterial endocarditis from enterococci
    (3) Mixed infections (as aspiration pneumonia)
    (4) Sepsis: depends on culture and sensitivity studies.
    (5) Undetermined meningitis; final choice depends on culture and sensitivity studies.

c. Certain antimicrobials are mutually inhibitory and should not be used together: i.e., penicillin and tetracycline or its derivatives.

Judge each case on its own criteria and calculate dosage for each drug used. Although fixed combinations are occasionally adequate, the consensus is against their routine use.

The treatment must be modified in the light of cultures, sensitivities, and patient response. If sensitivity studies reveal an organism known to develop resistance rapidly (such as staphylococcus, enterococcus, klebsiella, enterobacter, pseudomonas, and proteus) the initial choice may be changed or an additional agent added. The last is only occasionally needed.

The corollary of the above is that the physician must stop the drug quickly in the face of a possible sensitivity reaction (excluding minor skin rash). This means serum sickness, anaphylaxis, renal or hepatic impairment, blood dyscrasis, and so on. Fatalities result when such signs are ignored, or not looked for.

Adjunctive measures must always be used when indicated. Reliance on the antimicrobial alone may be unwise or dangerous. An abscess or focus of infection must be eradicated and urinary obstruction corrected, when found in the course of a urinary infection. Likewise, drainage methods must be instituted to help remove respiratory secretions in chronic pulmonary disease.

Check the package insert. When using an unfamiliar drug, the accompanying information leaflet should be carefully read. It is a good idea to recheck this information from time to time, as it may and does change. This insert information is a legal requirement of the manufacturer by the Food and Drug Administration, whose position has been that the physician should comply with the information guidelines in the leaflet. Whether this stance has the effect of law or not remains in question: the Food and Drug Administration has felt that it has, the American Medical Association and other medical groups have felt that it does not require the physician legally to follow these guidelines, but only to follow the standards of good medical usage for that particular drug.* Such standards may be difficult to define at times, *caution is in order* and the physician must be aware of potential dangers involved in ignoring "insert information." Misuse of drugs by the medical profession and extravagant claims by manufacturers have given rise to this problem.

PART II

SELECTIVE TREATMENT OF CERTAIN CLINICAL INFECTIONS

Bacterial Skin Infections (pyodermas). These are usually caused by staphylococcus or streptococcus, and may be treated by:

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*Nonapproved uses of FDA approved drugs, JAMA 211:10 (March 9) 1969, p. 1705.

Also see: Letters to the Editor, JAMA 213:11 (14 Sept 1970) pp 1902-4.

a. *Topical creams or ointments* containing bacitracin, neomycin, gramicidin, polymyxin, or any combination of the the above. These may be effective against a limited and superficial infection. Those in an Aquafor base are preferred.

b. *Germicidal soap* containing hexachlorophene or other antiseptics Phisohex, Dial, etc.) for daily washings is recommended.

c. *Systemic antimicrobials.* These are indicated for deeper infections such as impetigo, ecthyma, etc. In addition to a troublesome and resistant staphylococcus, there is always a slight risk of streptococcal sensitivity — rheumatic fever or other — which systemic therapy will prevent. Oral penicillin G or alternate such as erythromycin, or both should be used. If cultures demonstrate a resistant organism, use penicillinase resistant penicillin (oxacillin, cloxacillin, methicillin, nafcillin, or perhaps a cephalosporin, (or parenteral bacitracin in child less than 2 years). Sensitivity tests are requisite.

Upper respiratory infections.

a. *Viral infections* cause the vast majority of these (which often present with "ENT" localization, but with generalized symptoms such as malaise, fever, etc., due to the circulatory virus or *viremia).* Antimicrobials are *not indicated* unless secondary bacterial infection occurs of a serious nature (pathogenic invasions, abscess, etc.)

b. *Bacterial Infections*

(1) *Conjunctivitis:* may be due to staphylococcus, streptococcus, gonococcus, or other skin organisms. Use of ophthalmic ointments containing neomycin, bacitracin, and polymixin, (Neosporin, Neopolycin) are usually adequate.

(2) Rhinitis, especially in neonate, may cause an excoriating watery discharge from colonization with staphylococcus, group A beta-hemolytic streptococcus, pneumococcus, or C. diptheriae. This requires systemic therapy with penicillin or necessary alternates. Any such persistent discharge in an infant should be cultured.

(3) *Pharyngitis and tonsillitis* are mostly caused by viral agents, but 15 to 30% of cases will be caused by the group A beta-hemolytic streptococcus, which remains exquisitely sensitive to penicillin G. Cultures are mandatory, since streptococcal pharyngitis cannot be diagnosed by inspection alone, and the phrase "strep throat" is so corrupted that it has come to be synonymous with sore throats in general. Penicillin G is the first choice. We often give this in the form of "Pentids" in the suspension or tablet form, for a ten day course. It should be given on an empty stomach, spaced out through the day, in order to give the best blood levels. We usually order it to be given ½ hour before meals and bedtime *until gone.* If we suspect the prescription will not be picked up or given reliably, we give a single injection of 600,000 units of "Bicillin L-A" (benzathine penicillin) intramuscularly, as this will produce an adequate level for this infection for the desired ten days. Repository penicillin such as this has its drawbacks — it *hurts* more, and it is more apt to sensitize. But in the face of vomiting or unreliable parents, it is the form of choice. If patient is penicillin-sensitive, use erythromycin or a cephalosporin.

(4) *Otitis media:* probably the majority of these start as a viral infection followed by bacterial invaders, most often staphylococcus, streptococcus, pneumococcus, or H. influenza — the

last is said to be not amenable to penicillin G, but many strains do indeed succumb, and it is the first choice of drugs. If no response, consider the possibility of resistant staphylococcus or H. influenza and change the agent.

(5) *Epiglottitis:* This is an acute fulminating infection of the epiglottis due to H. influenzae, and calls for ampicillin (or alternate) and prompt emergency measures for ensuring an airway, such as intubation or tracheostomy, as needed.

(6) *Laryngitis:*

a. Spasmodic croup is probably a viral disease. Use supportive measures.

b. Infectious croup: This may be caused by H. influenzae, streptococcus, or pneumococcus: Try ampicillin or penicillin G. Take cultures (transtracheal method is best).

Lower Respiratory Infections

a. Bronchitis, or tracheobronchitis: etiology is mostly viral, but a few primary bacterial infections such as the following are possible:

(1) Pertussis; use ampicillin or erythromycin.

(2) Diphtheria, use erythromycin or penicillin.

(3) A primary viral infection followed by bacterial infection, most often staphylococcus, streptococcus, or H. influenzae. Use appropriate agents as indicated by culture.

b. *Bronchiolitis* is a viral infection; the basic lesion is edema of the bronchioles, and antimicrobials are of no avail in this disease.

c. *Asthmatic bronchitis* is not primarily a bacterial disease, although some cases may benefit when a secondary bacterial infection is treated, as certain bacterial antigens may cause a prolonged wheeze. Take cultures and try antimicrobials only in selected cases which do not respond to the usual supportive measures.

d. *Pneumonia*

(1) In the neonate, the staphylococcus, pneumococcus, H. influenzae or Klebsiella organisms are the principal infecting agents. The drug of first choice is methicillin; it is effective against staphylococcus, pneumococcus, and 80% of the H. influenzae. Then make necessary modifications in the light of the cultures. If the organism is Klebsiella, which is rare, use kanamycin, a cephalosporin, or as culture results indicate.

(2) Pneumococcal pneumonia: use penicillin, erythromycin, or cephalosporin.

(3) Mycoplasma, (primary atypical pneumonia) rare in children; antimicrobial effectiveness is not proven in children even though erythromycin or tetracycline have been touted for this.

(4) Aspiration pneumonia: This is common in the neonate, and is often a mixed infection which follows the bacterial flora of the nose and throat. Start therapy with ampicillin or penicillin G plus kanamycin until culture re--turns are available.

(5) A secondary bacterial infection superimposed on a primary viral pneumonia most often follows a specific viral infection, such as measles or influenza. Start with penicillin plus kanamycin, and modify as needed.

Note: In the days before antimicrobials, diagnostic lung puncture was often used to type the infecting organism. Use of this procedure is coming back as a very useful method for identifying the causative organism in pneumonitis when response to the usual treatment is unavailing. A suggested reference by Maxwell Finland is given at the end of this paper.

Gastro-Intestinal Infections. The majority of gastro-intestinal upsets are caused by viruses, but we should consider three common specific bacterial infections:

a. *Shigellosis (bacillary dysentery):*

In symptomatic cases, use ampicillin orally or parenterally in dosage of 50 to 100 mg in divided doses four times a day. If penicillin allergy is presented or suspected, use tetracycline 25 mg/kg/day in 4 doses, and continue either drug for 5 days. Overly vigorous treatment of a strictly intestinal infection may precipitate a systemic infection.

b. *Salmonellosis:*

The same precaution applies as in A above. Further, treatment is recommended only in infants, those with immunodeficiency states, or in those with chronic or debilitating disease. When indicated, use ampicillin or chloramphenicol 75 to 100 mg/kg/day orally in four daily doses for 7 to 10 days. Treat only symptomatic or systemic disease. Carrier states are not an indication for treatment unless they are in nurseries or closed institutions.

c. *Enteropathic E. coli diarrhea:*

Many neonates colonized for the first time with certain coliform organisms suffer violent diarrhea and must be treated. Give neomycin orally in dose of 100 mg/kg/day in 6 doses, or colistin sulfate (polymixin E) orally 15 to 20 mg/kg/day in 4 to 6 doses.

Urinary Infections. The best method of diagnosis is by suprapubic tap, for any bacteria cultured from such urine is indicative of an infection. If the specimen is voided (clean catch), counts in excess of 100,000 per ml indicate an infection.

a. *Acute infection:*

These are mostly caused by E. coli, but occasionally by proteus or Klebsiella - aerobacter organism. Start therapy with sulfasoxazole (Gantrisin) or triple sulfonamides, in dose of 120 to 150 mg/kg/day in four doses. The sulfas concentrate well in urine, and give satisfactory blood and tissue levels. Continue for a minimum of 3 weeks, and take repeat cultures to ensure the infection is cleared.

b. *Chronic infections:*

These are often caused by Klebsiella-aerobacter groups, proteus, pseudomonas, or mixed infections and may be asymptomatic. Treatment principle is to give *specific* antimicrobial agent for ten days or more, and then continue treatment with a suppressive agent for a prolonged period to prevent recurrence. Example: Polymyxin B or colistimethate, or kanamycin (according to culture studies) is given intramuscularly in 3 daily doses check package insert for recommended dosage) for ten to 14 days, and one of the suppressive antimicrobials such as nalidixic acid, or nitrofurantoin (preferred) are given in four oral doses daily for as long as necessary. Adjunctive measures such as increased oral liquid intake and acidification of urine are also recommended. This treatment may be needed for months or years. Anatomical defects must also be corrected.

Other approaches to treatment of urinary infections have been used with success. The above method has given good results for many physicians.

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911 – The Emergency Number

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NINE one one, (not nine eleven, since there is no eleven on the telephone dial) is a universal telephone number proposed by the Bell System for use in the United States for obtaining emergency help.

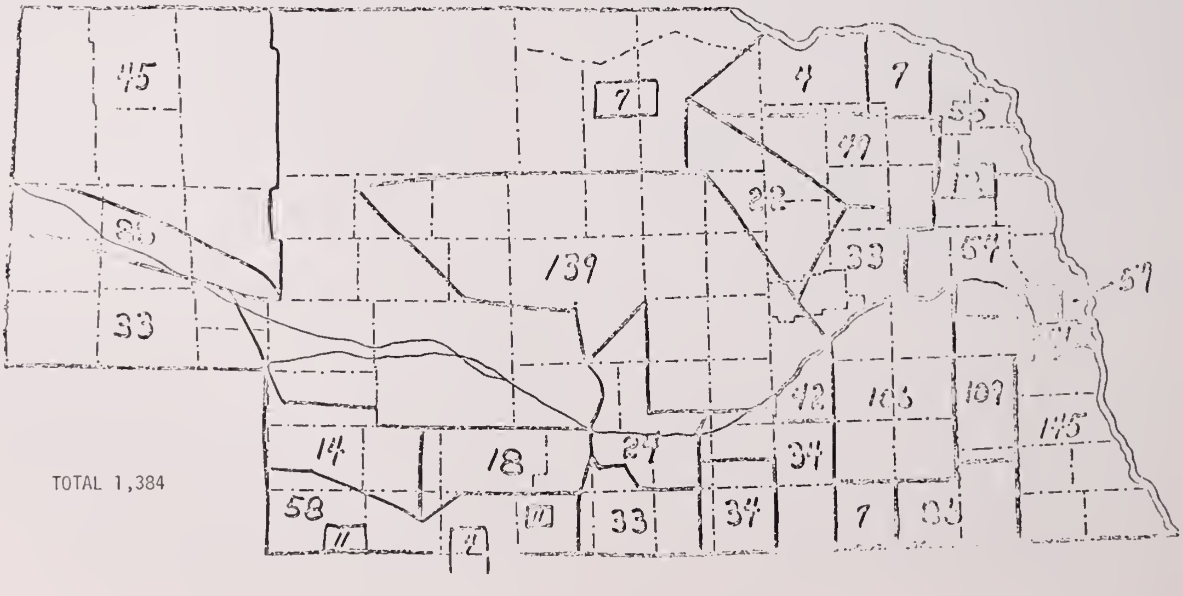
A single telephone number has been used for years in European countries with great success. Austria has its 233, the Netherlands its 900, Denmark its 55555. Thus, anywhere you may be in one of these countries, the same single telephone number reaches emergency help and speeds it on its way to you. Most accept any and all types of emergency calls.

The complexity of our telephone system in this country is compounded by the many different companies providing our service. (There are over 70 companies providing service in Nebraska alone). Map #1 shows an estimate of the number of different telephone numbers which you would need to know in any one area of our state in order to call all emergency agencies in that same area. Some of us know the number of our local police, the local fire department, perhaps our physician's number. These are our local area telephone numbers and yet how many of us could write these down now?

For years the problem was partially solved in the United States by the presence in every community of a switchboard operator who knew everyone in town, where they went for coffee, and often when they were at coffee. As the complexity of our telephone system increased, she was replaced by automatic switching circuits. (It has been estimated that if no automatic switching was used today, it would take every woman in the United States to do the job). This was followed by direct dialing and the use of area codes. Today, there are about seven locations in our entire state where your call goes when you dial 0. Thus, stopping at the York rest area on Interstate 80 and dialing 0 may

PHONE 911

EMERGENCY PHONE NUMBERS IN NEBRASKA BY TELEPHONE



give you the operator in Grand Island, some 43 miles away. Such an operator will be glad to give you a telephone number in that area, but she can hardly be expected to know how to get detailed help in York, the closest city to you.

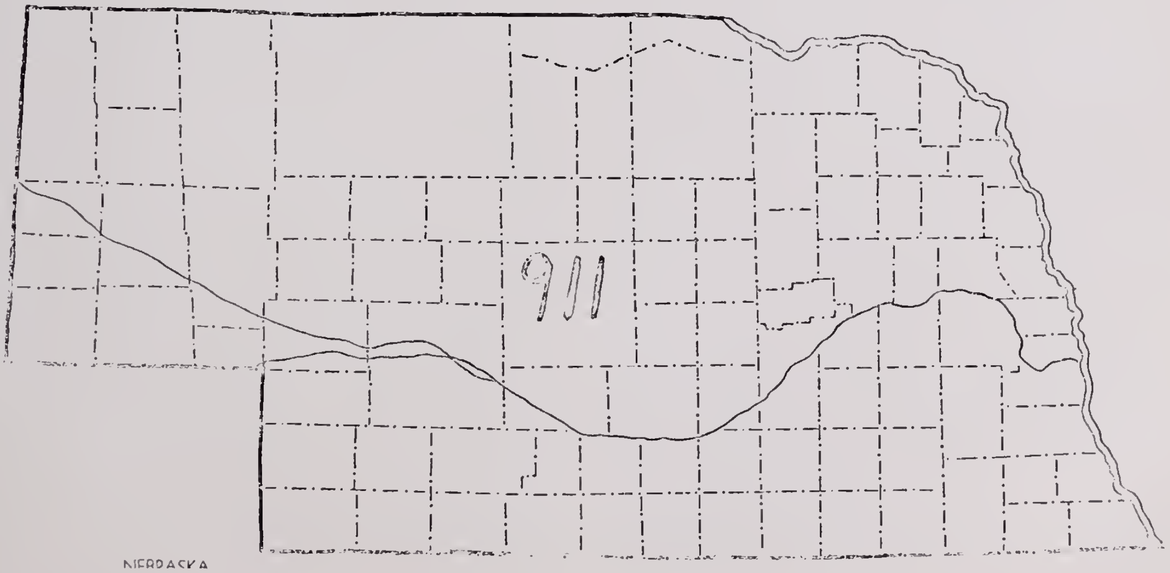
Acceptance of the challenge for a common 3 digit phone number by the Bell System at a cost of millions of dollars to them really only opened a Pandora's box. They could change their switching systems so that anyone dialing 911 would reach a center, but too often, no one had thought out where that center should be, how it should be manned, who it should connect to, whether or not it should be tied in to radio dispatch, and who would finance the center. A few communities simply changed the number of their hospital phone or that of their police to 911. Imagine the hospital phone ringing at night and a nurse who is already too busy with patients being asked to send the fire department to a fire on a farm.

General Welch, Adjutant General of Nebraska and Director of Civil Defense; General Penterman, Deputy Adjutant General of Nebraska, and Burl Johnson, Deputy Director of Civil Defense for our state, have been leaders in a study to develop a common center in a community for the reception of the 911 calls, for other emergency communications, and for the capability to dispatch the emergency response vehicles. Studies showed that many communities had no emergency personnel on duty at night, others had someone answering police calls at one location, another answering fire calls at another location, and still others taking ambulance calls. None are really busy, and by combining their activities it is possible to have fewer but better trained men, save money, and still have a more efficient operation.

Major cities could easily establish such a center, medium - sized communities might need and use such a center during only part of the day, and small communities might best function on an area basis. During times of little activity any center could throw a switch and remote its activities. This could result in a saving of money and still maintain operating efficiency. We thus could end up with a central 911 center for the major cities, area centers in the sparcely populated sections of the state, and a combination of the two in medium-sized communities.

911 is already operating in Hebron, Sidney, Grand Island, and most of Lancaster, Douglas, and Sarpy counties.

North Platte is scheduled for operation by September, and Hamilton county hopes to be in operation by that time. Kimball, Ogallala, Norfolk, and Hastings-Adams county all are actively planning for the implimentation of this service.



The major telephone companies are hoping to provide this service to most of the state by the end of 1971.

The Grand Island operation is a classic example of a well-coordinated center developed under the leadership of Civil Defense and with the close cooperation of other involved agencies. All emergency communications are tied to one center. It is efficient for day to day operation and may be lifesaving in times of disaster. It is well worth taking a look at since it might well serve as an example for you.

How about your community? If you had an emergency in your own community or anywhere in the United States wouldn't it be nice to know that by dialing 911 you could get help?

Rising Medical Costs*

WILLIAM H. HEAVEY†

I doubt whether any of you would be here today if you were not concerned about the problem of increasing medical costs. If you are a Blue Cross - Blue Shield member and have not had your rates increased by at least 30% within the past six months, I'd be surprised. I'd be amazed if your last hospital bill wasn't substantially higher than you may have expected. Hospital bills in the thousands of dollars are commonplace today.

At the risk of boring you, let me cite a few statistics: The cost of hospital care per stay for our Blue Cross members increased 52% from 1950 to 1966. From 1967 to 1970, the cost increased 54% — or an increase of 18% a year. These are statewide figures, based upon the average charge per stay.

In comparison to all other Blue Cross Plans which, in total, cover roughly 70,000,000 people, or one third of the total population in the United States, we have the highest rate of admission per 1,000 members. We admit on the average, 190 people per 1,000 members, as compared to 126 nationally — almost 51% more. Therefore, the most obvious alternative is to keep the patient out of the hospital unless he really needs in-hospital care. The recent pronouncement by Dr. Amos Johnson, a former president of the American Academy of General Practice, before the antitrust and monopoly subcommittee of the United States Senate, to the effect that patients are too freely admitted to hospitals, is but one reference to overuse of hospital beds. Before we get too critical of our physicians, many of whom are overworked and who have become the focal point of political criticism, we all must share in the blame of overuse of hospital facilities. The traditional approach by prepayment and insurance, which requires the patient to be horizontal before any payment is made, is perhaps the most obvious, and places the physician in an almost untenable position with his patients. Superimposed upon this problem is the pressure placed upon physicians by the hospital administration to keep occupancy at a reasonable level. With the overload which physicians must deal with, especially in the outstate areas, the threat of a malpractice suit forces the physician to the use of the more expensive facilities and services to protect his only asset — his credibility with his patients. Demand by the patient for unnecessary care is not to be overlooked. The use of Peer Review, Utilization and Review, and Admission Committees is emerging, and could be very helpful mechanisms in controlling unnecessary use of hospital services. However, the insurance mechanism, as well as the institutional providers, must join hands with the physician if any of these committees are to function as they could.

According to the Consumer Price Index, the "Medical Care" component nationally increased at double the "all items" rate. Hospital daily service charges rose still more rapidly, and were over 157% of the 1957-1959 average level at the end of 1965. And then we got Medicare and Medicaid, which placed extreme demands upon the health care system. The effect of these programs on hospital charges was particularly dramatic. By June of 1967, the daily hospital service charge had more than doubled the 1958 base, and the steep rise had only begun. Hospital charges skyrocketed 68% of the base level in the next two years, to stand at well over two and a half times the 1958 average level in December, 1969. In purchasing power terms, the consumer's hospital care dollar had fallen in value to 37.3 cents. And it continues. In January of 1970, the annualized rate of increase for "all items" in the CPI was 4.8%. For total health care it was 9.6%. For physicians' fees, it was identical to the "all items" index of 4.8%. But for daily hospital services, it was 16.8%.

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*Presented at a seminar on Areawide Health Planning, Grand Island, Nebraska.

†Executive Director, Nebraska Blue Cross - Blue Shield.

There is no reason to be surprised. The one fundamental and inescapable economic fact of life is that government is the only source of inflation and the only institution we have which is capable of slowing or halting inflation. And when the federal government indulges in increased spending without a corresponding increase in taxes, we can only expect inflation to continue. In terms of health care, it is obvious that when the health care system was called upon by Medicare and Medicaid to furnish more health services without a corresponding increase in the capacity of the system to supply these new services, health care prices soared and will continue to rise.

It seems to me that the question we must ask ourselves in all candor is . . . Why has inflation had a greater impact upon the health care system than it has generally? Well, obviously, the health system, especially the hospital system, was beset by more economic problems than was industry in general. For example: Amendment of the minimum wage law within recent years had an impact, especially in the rural areas of Nebraska, and perhaps a very real impact in a few institutions. We know that the cost of supplies are increasing, and the introduction of new equipment requires a higher degree of employee sophistication and thus cost. The more sophisticated accounting requirements being imposed upon hospitals do require higher costs in terms of sharper management standards. Reversal of the charitable immunity doctrine in Nebraska and the ever-increasing costs of malpractice insurance for physicians added to costs. Escalating costs of construction, along with higher interest rates and less subsidy from the federal government and the community, cannot help but result in increased costs. Failure of the state to appropriate subsidies for nursing education in the voluntary institutions adds to costs which are ever on the rise. Militancy by hospital employees, resulting from the pressure of increasing demands upon the system, can only continue to affect salaries and fringe benefit costs. The method by which hospitals and extended care facilities are reimbursed by government leaves little incentive for institutional management to mitigate costs.

Although these are very real problems that affect health costs in our state, there is much that can be done to decrease the pressures imposed by the inflationary forces at work . . . if we want to apply ourselves. The reason we don't and the reason we haven't — with any degree of success — is because we are involved in a service which arouses strong emotional and social attitudes — both on the part of providers and patients. This is what makes it so difficult to dig in and face up to the real problems underlying our current dilemmas.

There is a real reluctance by the provider to change our health system to any degree. Why? Because he knows it is a strong system which relies on quality. Because he is primarily responsible for the output of the system — quality care — he realizes that cost must remain a secondary consideration if quality is to remain our key product.

The consumer, on the other hand, is not that close to the output and does not focus on quality for two reasons. First of all, the consumer, in terms of paying for care, is not necessarily the patient. It is the large corporation, government, the negotiated trust fund, or other third parties, who are now picking up a major portion of the health care tab, either through taxes, prepayment premiums, or self-insured arrangements.

Secondly, the consumer, whether it is the patient or the third party, has no basis whatsoever to judge quality of care except superficially. Not being able to measure, therefore, what he is really purchasing, he focuses in on what he does understand and that, of course, is the cost of the services he receives.

The focus by the consumer on costs results ultimately in political involvement. Several bills have been introduced in Congress which would, if enacted, substantially change if not destroy our voluntary system and the pluralistic approach we now have. A few of these bills would force a monolithic system which would introduce a high degree of rigidity inherit in a politically controlled endeavor. Bureaucracy thrives on uniformity. It cannot demonstrate improved quality, despite its ability to manipulate statistics; and it too focuses primarily upon costs. The thesis of the proponents of National Health Insurance goes something like this:

> "The delivery system is much too fragmented to provide care for all. If we can control the pursestrings, we can force changes in the system which will bring costs into line so that everyone will receive necessary care."

A familiar theme, and a discouraging prospect.

The response to these pressures to date has been less than encouraging. With everyone now in virtual agreement that people have a right to health care — or at the very least a right to access to health care—the demands upon the system, if anything, will increase rather than level off, even if the current Nixon anti-inflationary measures are successful. And it is this very reason why we must look to alternatives to slow down the inflationary rise we are currently experiencing in our field other than merely increasing charges to offset increasing costs.

A second alternative, and the one which I believe lies at the crux of our dilemma, is our disproportionate use of personnel. Rural Nebraska suffers not only from a shortage of physicians, but a shortage of all other paramedical personnel. It is increasingly difficult to attract physicians to rural areas and those that remain are aging. There is also frequent complaint of overwork. Nurses and technicians are not easily obtainable and oftentimes vital and critical supervision of medical needs must be sacrificed. Although I applaud the universities for their involvement in the family practice specialty, I am apprehensive about the long-term results insofar as funneling these men into the present rural health care system is concerned. And frankly, I believe that the basis of any future planning should not be predicated on an increase in the number of physicians who will practice in small communities but, on the contrary, it should be recognized that the attraction to suburbia in the metropolitan areas will continue for some time to come, even in the family practice specialty.

The suggestion that the manpower shortage may be overcome by delegating certain of the physician's functions to nurses and other paramedical personnel is not one with which I am competent to deal. This must be a professional determination. I may only wonder how the physician is to delegate certain functions to paramedical personnel which do not exist in many localities. In other words, even if this approach is determined a feasible one, how would it work, for example, in the rural Nebraska system?

We are simply deceiving ourselves if we believe that hospitals and extended care facilities can continue, without public accountability, to build and expand without aggravating the primary problem we have . . . manpower distribution. The fact that an area in our state or elsewhere does not face a manpower problem is no cause to add facilities to accommodate that supply. On the other hand, to believe, for areas with a shortage of manpower, that by increasing existing facilities they will attract medical manpower is equally fallacious; and it is primarily this philosophy which has seriously affected our delivery system and has been a major factor in our inability to slow down the rise in health care costs.

Public accountability may take many forms. Many believe that proper planning of facilities to make optimum use of manpower resources can only be accomplished by a chartering system such as exists in the banking system. This supposes state control by an appointed official with power of life and death over building or expansion programs.

Voluntary Areawide Planning, in my opinion, is the proper course to follow. However, it has had so little success despite the efforts expended as to make one wonder if it will ever work. But this is really the only available alternative to state chartering.

Perhaps we will have both, but it is a real shame that we cannot, apparently, choose voluntary planning over compulsory allocation of facilities. I am sorry if I offend any of the people who work at planning full-time, but I would be less than honest to tell you that we have done any meaningful planning anywhere in the state, except perhaps in the Lincoln area. Even here, major goals have not had total acceptance, although a measure of maturity is emerging.

To those who would argue that voluntary planning violates our competitive system, I would respond by asking . . . competition between whom? I am a lay person. I wouldn't know quality care — our only product — if it hit me between the eyes. Yet I am paying the bill. Is that quality improved by building three hospitals within a 50 mile radius and then competing for capable manpower in a seller's market? If we build four cardiac care units in an area which requires only two, how are they to be adequately staffed with a manpower shortage and yet produce the quality care which the physician demands? How is quality of care enhanced by building six surgical rooms when only three are needed if proper scheduling is maintained? How is proper scheduling to be maintained if the physician is expected to be in three places at once? Insofar as the consumer is concerned, competition between institutions, which works so well in our economy in almost all other areas, is pure fiction when applied to the patient in an institutional environment and, to a large measure, defeats the goal of quality care rather than having the effect desired.

I hasten to add this: Unless some restraint is placed upon an institution's unilateral ability to build or expand, the fee-for-service concept which we support as the primary reason our health system maintains the excellence it does, will collapse under the inevitable pressure of the disproportionate use of manpower, and will permit governmental reorganization of medical care under a monolithic system.

After all that — are we over-built in Nebraska in terms of beds? Nebraska has 4.5 short term, non federal, general beds per 1,000 population. Nationally, it is 3.8. In the Omaha and Council Bluffs area, we have 5.8 beds per 1,000 population. The Kaizer Foundation, which is often cited as an example, figures it needs 2 beds per each 1,000 members enrolled, primarily because of the concentration of people served. It operates, of course, on the group-practice concept, which is a different and not the highly successful story publicized; and I cite it only as an illustration of the parameters different segments use to measure bed need.

Distribution of population in a state such as Nebraska is a factor which should be taken into consideration in evaluating bed need. Longer distances to travel may very well require a higher ratio. Why then, do we have such a disproportionate ratio in the Omaha metropolitan area which, incidentally, has no organized planning? Frankly, I don't know if we have too many beds. This I do know . . . we'd better find out.

It's not easy, I know, to plan a hospital out of existence. If I lived in a community for years and was suddenly faced with the loss of my family physician, I would react as most communities do. I would build a hospital or clinic in the hope that a physician would come to town; and I would bang every political desk I could to get federal or state money to make all that possible. If I were a physician who practiced in a hospital for years, I would not, without a fight, be forced to another institution where I was not welcomed or felt did not render the quality of care which my patients had previously enjoyed. As I mentioned earlier, we are involved in a service which arouses strong emotional and social attitudes. This is what makes the problem so difficult.

It is not difficult at all to continue the present course . . . watching costs escalate at the rate of double the Consumer Price Index "all items" rate. We can continue to hope for manpower in the rural area which will not be available within the foreseeable future. We can continue to plan separately, watching our bed ratio increase in the belief that more and more beds and equipment will somehow magically attract more qualified personnel. We can delude ourselves into believing that the more sophisticated equipment being produced will result in less need for manpower, whereas most improvements call for more manpower at a higher level of ability. We can allocate more money in order to turn out more personnel, only to see them absorbed into government, industry, medical schools, suburbia, or by the less demanding group practice arrangements . . . areas where there is already an oversupply in many cases. I hope we don't.

I hope we attack our problems from the standpoint of evaluating what we can really afford without sacrificing quality. Will we continue to build beds and add facilities despite possible inability to man them effectively? Do we really need a physician or hospital in every community or have we advanced to the point of planning regionally in order to take full advantage of manpower — a concept which can only improve the delivery system in terms of quality? Must we continue to duplicate facilities within the community in order to keep up with the Joneses under the mistaken belief that underused facilities will improve the quality of care?

Planning within the framework of the community, rather than individual institutional decision-making, is obviously one mechanism which could work to help alleviate the critical problem of personnel distribution. If we attack that problem, we can effect a greater supply of services to meet the ever-increasing demands upon the system. Only by meeting that demand as effectively as possible can we hope to contain the costs of health care in Nebraska.

Clinical Management of Patients With Prosthetic Valves

MORTON KORN, M.D.*

REPLACEMENT of diseased heart valves has created a large population of patients with prosthetic valves. A prosthetic valve may be inserted in the mitral, tricuspid, or aortic position, or any combination of these. Artificial atrioventricular valves usually consist of a caged plastic disc or ball; the most commonly used mitral prosthetic valve in our institution is the Beall valve. The cloth-covered Starr-Edwards ball valve has become the most widely utilized aortic valve prosthesis. The clinical problems presented by patients with the varied types of prosthetic valves are similar.

General Considerations

The care of the patient with the prosthetic valve requires close, careful follow-up. It has been our practice to keep patients in the hospital for at least two weeks postoperatively. By this time there should be no residual problems relating to fever, infection, unrecognized leaks around the prosthesis, hemolysis, post - pericardiotomy symptoms, or anticoagulation. If the level of anticoagulation is adequate and the anticoagulation dosage has been stabilized, we recommend that the patient be seen one week after discharge. Thereafter, the patient should be seen monthly for the next six months. At six months we urge recatheterization of all patients with prosthetic valves. It has been our experience that most patients readily accept this and that a great deal of significant information can be obtained relevant to the function of the prosthesis, the presence of valvular insufficiency, and the state of myocardial contractility.

Patients with a prosthetic valve should be encouraged to live relatively normal lives. We urge our patients to resume their full activities over a six month period. Most patients appreciate general guidelines for resumption of activity; occasional patients ask for day-to-day activity schedules. The basic guideline which we set is gradual progression of activity to limits of tolerance. A reasonable social and sexual life is encouraged. We discourage patients from smoking and using alcoholic beverages, the latter because of difficulty which may be encountered in maintenance of prothrombin time control. Our patients are usually urged to remain on a one gram (or less) sodium diet. We suggest that our patients inform their dentists of the presence of their prosthetic valve.

Specific Considerations

There are a number of important specific aspects which are involved in the day-to-day care of patients with prosthetic valves. First, each patient should have a thorough physical examination on each visit to his doctor. Great care must be paid to the quality of the prosthetic valve sounds. While it is beyond the scope of this paper to discuss the subtleties of prosthetic valve opening and closing sounds, suffice it to say that the physician should be aware of what any patient's prosthetic valve sounds like, and must be alerted by any changes which occur in these sounds. It also behooves the physician to be aware of any regurgitant murmurs suggesting a paravalvular or valvular leak.

It is usually necessary for these patients to utilize one of the cardiac glycosides. Many patients with prostheses are in atrial fibrillation and require glycosides for control of ventricular rate. With rare exceptions, we thus keep all of our patients on Digoxin, 0.25 to 0.5 mg daily. Coincident with the use of digitalis the physician must determine the serum potassium level at frequent intervals. If the patient is receiving diuretic therapy, we encourage the use of potassium chloride supplementation. Dietary intake is usually insufficient to maintain normal serum potassium levels in most patients taking even small doses of diuretics. We supplement the diet with 10 ccs of 10% potassium chloride three times a day, or one ounce of the sugar free potassium chloride solution (20 mEq) three times a day. Potassium chloride tablets should not be used. The incidence of digitalis intoxication will be reduced in relative proportion to the physician's ability to maintain an adequate serum potassium level.

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*Chief, Section of Clinical Cardiology, Division of Cardiology, Mount Sinai Hospital of Greater Miami.

We have adopted the principle of anticoagulating all patients with mitral and tricuspid prosthetic valves permanently. Formerly we felt that a six month period of anticoagulation was adequate; however we have recently encountered a sufficient number of late emboli even with the Beall valve to alter our policy. On the other hand we are anticoagulating the patients with cloth-covered aortic prosthetic valves for six months only, unless an embolic episode occurs in which instance permanent anticoagulation is used. Patients who are on anticoagulants must be aware of the fact that the coagulation mechanism has been disturbed by the medication. Such patients must call to their physicians' attention any problems of oozing or bleeding. Aspirin must be avoided. We encourage all patients on anticoagulants to look at their stools periodically and to report any darkening.

The use of rheumatic fever prophylaxis in patients with prosthetic valves is a controversial subject. Many groups discontinue routine prophylaxis at an arbitrary age, usually 21. We have elected to continue all of our patients with known or suspected rheumatic heart disease on daily penicillin therapy. Erythromycin is used in the patient who is allergic to penicillin. It is critical that the principles of subacute bacterial endocarditis prophylaxis be applied to any patient with a prosthetic valve who is to undergo a dental or surgical procedure. This cannot be over-emphasized. We have seen bacterial endocarditis in patients who were not on appropriate prophylactic antibiotic therapy before a minor dental procedure. Our policy has been to adhere to the recommendations laid down by the American Heart Association.* For procedures involving the gastrointestinal and/or urinary tract streptomycin is given in addition to penicillin.

It has been recently realized that all patients with prosthetic valves have some degree of hemolytic anemia. This is marked by elevated serum LDH reticulocytosis and hemosiderinuria. Two problems may emerge in association with the hemolytic anemia. First, these patients may become iron deficient because of the loss of iron in the urine. Second increased erythropoiesis exaggerates the daily requirement for folic acid. It has therefore been our policy to treat all patients with prosthetic valves with both iron and folic acid as long as there is any evidence of significant hemolytic anemia. Fortunately, serious hemolysis usually ends within six months, as the valve becomes endothelialized. The occasional patient will have need for intermittent packed cell transfusion over the first three to four months following valve insertion because of severe hemolytic anemia.

The final point worthy of emphasis concerns routine follow-up of all patients with prosthetic valves with an electrocardiogram and chest x-ray every six months. The electrocardiogram serves as an index of heart rhythm and rate, and calls attention to problems, such as digitalis intoxication, which can be missed clinically. The serial evaluation of heart size by chest x-ray is an important adjunct in evaluating the patient's progress.

The purpose of this paper has been to outline the general and specific therapeutic problems which may be encountered in management of the patient with a prosthetic heart valve. These patients offer both challenge and reward to the physician responsible for their management.

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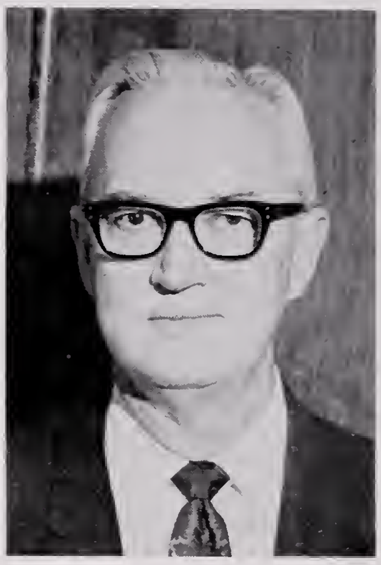
*Management of Dental Problems in Patients with Cardiovascular Disease (EM-349). Prevention of Bacterial Endocarditis (EM-113B). Obtain from your local Heart Association.

Paper Tiger?

PRESIDENT'S PAGE

C. R. BROTT, M.D.*



Every practicing physician should be thinking about whether his community is getting adequate medical care. Rural areas are desperately short of doctors, and urban slums need help. This means we must act to control the many changes that are reshaping the conduct of medical practice. The lame-duck session of Congress with its filibuster, Christmas holidays, etc., has not accomplished any legislation of importance affecting the national health scene. Hopefully, adequate study and time will be given to these problems in the 1971 Congress.

The change in the way medicine will be practiced is reflected by consumer attitudes and expectations of health services. As Dr. Egeberg said, "We can't have a health care system that works outstandingly well for a few, reasonably well for a great many, and poorly or not at all for those at the low end of the scale." According to his estimate, 30 to 40 million in the United States do not have adequate access to care. Pouring additional billions of dollars into an already over-inflated economy and overburdened health system is not the answer.

Dr. Walter C. Bornemeier, President of the American Medical Association, at the Clinical Meeting in Boston, encouraged the "production of high quality physicians, in sufficient numbers to care for the needs and desires of our people during every phase of illness, as much as possible outside the costly confines of today's hospital." Methods of increasing the number of physicians were outlined in his inaugural address.

Increasing the size of freshman classes and the number of medical schools will only begin to alleviate the shortage of physicians. A proposal by Dr. Gerald D. Dorman, Past President of the A.M.A., suggests a two-year medical course with multiple-track curriculum leading to a bachelor of medicine degree, at which level he might be considered a physician's assistant. For those who desire to go on, an additional two-to-five year postgraduate course would lead to a specialty — surgery, family medicine, or whatever specialty the individual chooses. The degree would have an expiration date of five or six years, renewable by recertification after re-examination.

This preparation would be a combination of classroom study, hospital residency, preceptorship in solo or group situations as is being carried out by the Nebraska Academy of Family Practice at the present time. Further expansion of this concept is already being instituted by the residency program of family practice using out-state hospitals to augment the university program.

Our state association will have to make every effort to provide physicians for the smaller communities. We will need to develop methods to attract more young people into medical and allied health care fields. Physicians' fees have risen less than the general rise in other costs during the past few years, but the added demands by governmental agencies for more reports and forms cost money. We might do well to attempt to cut down the "red-tape" and thus lessen the pressures for the physician's assistant. More and more committee meetings with increasingly detailed elaborate medical forms can only decrease the physician's time for actual patient care.

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*President, Nebraska State Medical Association.

While Making Rounds

Quote Unquote.

"It is the common fate of the indolent to see their rights become a prey to the active."

Curran

"I am not here concerned with where the money comes from, but rather with how it is spent."

Draper

"The most essential part of student's instruction is obtained, as I believe, not in the lecture room but at the bedside."

Holmes

Words We Can Do Without.

Dorsal recombent
Falciform
Shotty

Strange Disease Of The Month.

The fish-odor syndrome.
It's trimethylaminuria.

Our Own Monthly Statistical Report.

The flu epidemic of 1918:

Sick — 500 million
Died — 15 million
M.R. — 3 percent

Who?

Who first transfused blood, from animal to animal?

Lower, in 1665.

Curiosity Corner.

Patella's disease is not in the patella.

Lines To Practice By.

"Uncertain ills torment us most."

Seneca

"Sickness makes a man a scoundrel."

Samuel Johnson

Anniversary Time.

February 15, 1875

Filatov born, originator of corneal transplantation.

—F.C.

WashingtoNotes

1. Emergency health personnel act

The federal government now has the authority to expand the U.S. Public Health Service to provide direct medical and other health care services in ghettos and rural areas where there are shortages of physicians and other health personnel.

Before such a program can be started, the state and local medical society must certify that it is needed.

The Senate approved the authorizing legislation, 66 to 0, and the House by an almost unanimous voice vote. President Nixon signed it into law on Dec. 31 although the Secretary of Health, Education and Welfare, and the PHS surgeon general had asked Congress to defer action until the President had presented his overall health program early this year.

The legislation authorized $10 million for the current fiscal year ending next June 30, $20 million for fiscal 1972 and $30 million for fiscal 1973. The money must be appropriated before it is available for the program.

In its report approving the legislation, the House commerce committee expressed a hope that it would help revitalize the PHS which the Nixon Administration reportedly has been planning to further downgrade, or even eliminate, in a reorganization of the health activities of HEW.

"That the Public Health Service has been allowed to languish, and that the great functions it has performed have largely been stripped from it, is the fault of this and previous administrations, and a tragedy from the standpoint of the nation's health needs," the committee report said.

Physicians enlisting in the program will become PHS commissioned officers and, as such, be exempt from the military draft. Fees paid for their services will be set by the HEW secretary and go into the U.S. treasury.

The HEW secretary has the responsibility of determining, after consultation with local officials and health groups, what areas need such a program. He then can assign PHS personnel there after receiving a request from a state or local health agency or other public or nonprofit private health organization and a certification of need from the state and local medical society.

The new law — the "Emergency Health Personnel Act of 1970" — also provides for the establishment of a 15-member National Advisory Council on Health Manpower Shortages. It will include three members from the health professions, three members from state health or health planning agencies and four from the general public representing consumers of health care.

2. President's health

President Nixon was pronounced in "excellent health" with a "young man's blood pressure" after his annual physical checkup.

Air Force Brig. Gen. Walter Tkach, M.D., the President's physician, said that all the tests given the nation's chief executive at the Bethesda (Md.) Naval Medical Center were within normal limits. The examination team of five physicians including himself, Tkach said, found Nixon's blood pressure to be 118/82 compared to last year's reading of 120/80. He described it as a "young man's blood pressure, ideal" for the president who was only 10 days short of his 58th birthday.

Tkach's only recommendation for Nixon was that he take more time for exercise and recreation, preferably in California or Florida. The President partly heeded the advice, going to California shortly thereafter for a "working vacation."

3. Cancer and heart disease

Three major reports before the federal government urge extensive programs to combat cancer and heart disease.

A special panel of 26 expert consultants, in a report to the Senate Labor and Welfare Committee, urged a multi-billion dollar crusade against cancer in an effort to erase its "staggering" impact of death and suffering caused by the disease.

The National Advisory Cancer Council urged increased educational efforts by both governmental and private agencies to warn the public against the hazards of smoking.

The Inter-Society Commission for Heart Disease Resources recommended a program that would promote drastic changes in the nation's dietary habits, elimination of cigarette smoking and research into the causes of high blood pressure.

The latter two bodies were set up by the Department of Health, Education and Welfare. The heart disease commission is made up of more than 100 experts in cardiovascular disease, epidemiology, radiology, rehabilitation and surgery from 29 medical organizations, including the American Medical Association, the American Heart Association, the American Nurses Association, the American Hospital Association and the College of Cardiology.

Based on a four-month study, the cancer report to the senate committee included an estimate that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the president.

"The Committee is unanimously of the view that the conquest of cancer is a realistic goal if an effective national program along the lines in the report is promptly initiated and relentlessly pursued," said Benno C. Schmidt, co-chairman of the group.

The report recommended doubling cancer research spending to $400 million in the 1972 fiscal year, and increasing it by $100 million to $150 million in subsequent years to a $1 billion level in 1976.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be devoted primarily to research into the causes and cures of cancer, rather than to patient care.

The National Advisory Cancer Council's fourth annual report on the state of the art in cancer research cited the more than 60,000 deaths in a year in the United States from an "epidemic" of lung cancer attributed mainly to cigarette smoking. The report dealt with the chemical causes of cancer and the effects of many environmental factors, not only the "private pollution" of smoking but also the more public air pollution from industrial and commercial wastes, as causative agents in malignant disease.

As of January 2, a ban on all advertising of cigarettes on television and radio became effective under legislation approved in the Congress, and all packages of cigarettes manufactured and sold in the United States now must carry a new printed warning: "The Surgeon General has determined that cigarette smoking is dangerous to your health." This replaced the milder warning required by a 1965 law that expired in 1969 which said: "Caution: cigarette smoking may be hazardous to your health."

Although a substantial portion of this report of the Council was devoted to the problem of smoking and health, it was stated that the production of cancer by chemicals is part of a larger problem of the hazards facing man in a polluted environment. The report pointed out that the death rate from cancer continues to increase despite steady improvement in the cure rate, and suggested that this may be related largely to increased exposure of the population to cancer-causing agents in the environment.

The heart disease commission's report said the nation's cholesterol-rich diet, cigarette smoking and high blood pressure are the primary reasons for one million heart attack deaths and 600,000 heart disease deaths in the United States annually. The report cited five secondary factors: obesity, diabetes, tensions, sedentary living and heredity.

The commission urged "safe and reasonable" changes in everyone's diet to reduce saturated fats and cholesterol even though present evidence that such dietary changes would help is now "suggestive" rather than "conclusive." In an effort to obtain "conclusive" evidence, the commission's experts recommended large-scale, federally-financed scientific studies of American eating habits and their consequences in terms of heart-artery health or illness. The commission envisaged studies costing about $80 million, requiring 10 years and involving some 60,000 persons on typically high-fat diets as subjects.

4. HEW appropriation

Congress appropriated for the Department of Health, Education and Welfare more than $300 million more for current fiscal year (1971) for its health programs, other than medicare and medicaid, than was requested by the Nixon Administration.

The appropriation approved by Congress was a compromise between House and Senate figures and represented increases over Administration allotments with the exception of the two for the Food and Drug Administration and Comprehensive Health Planning which were the amounts requested — $89.5 million and $247.1 million, respectively.

The total HEW appropriation for specific health programs amounted to $739.9 million. The National Institutes of Health appropriation included $275.9 million for health manpower programs, $33.7 more than asked. The mental health appropriation totalled $379.5 million, a $32.8 million increase. A $196.5 million appropriation for medical facilities construction included a $107.2 increase. There was a $300,000 increase in the maternal and child health appropriation of $255.6 million.

5. Children

The Nixon Administration has been urged by a "Health Caucus" headed by the American Medical Association's president to give a high priority to health services for children.

The caucus comprised representatives of the AMA, the Women's Auxiliary to the AMA, and the American Dental Association at the White House Conference on Children. Dr. Walter C. Bornemeier, president of the AMA, was chairman.

Stephen Hess, chairman of the conference, said he would forward to President Nixon a letter outlining the unanimous views of the caucus. The letter was accompanied by a resolution on child health care adopted by the House of Delegates at the AMA's 1970 clinical convention in Boston, Mass. The caucus cited the resolution's five recommendations as examples of steps that should be taken to improve child health care. The recommendations:

—That relevant parent health education related to total health of the mother, leading to the seeking of prenatal care, be made available on a wide scale.

—That medical care that anticipates high risk mothers be made more readily available.

—That in each state a system of intensive care units of potential high-risk mothers and infants be developed.

—That the conference urge the expansion of the health aspects of programs for all school children.

—That all payors of health care (the insurance industry) structure their contracts to cover the newborn from the moment of birth.

Total Pancreatectomy — W. H. ReMine et al (Mayo Clinic, Rochester, Minn 55901). Ann Surg 172:595-604 (Oct) 1970.

Pancreatectomy was performed on 36 patients during a 27-year period, with an operative mortality of 16.7% (six patients) and an overall five-year survival rate of 52.6% among those patients eligible for follow-up (11 of 19 patients). Twenty-three resections were performed for carcinoma, with an operative mortality of 21.7% (five patients). Seven of the 18 patients who survived operation were eligible for five-year follow-up: two of the seven lived five years or longer, and one is alive and well ten years after operation. Four patients lived more than four years after operation and seven survived more than two years after operation. Ten patients were operated on for islet-cell tumor, with one surgical death. Eight of these patients lived five years or longer (88.9%), six are alive and well now, and one is alive and well 27½ years after total pancreatectomy was performed. Three patients with chronic pancreatitis had total extirpation of the pancreas. There were no operative deaths, and one patient lived eight years after surgery.

Children of Divorce — M. Sugar (17 Rosa Park Pl, New Orleans 70113). Pediatrics 46:588-595 (Oct) 1970.

The result of a home broken by divorce may be similar to the death of a parent, affecting the emotional growth and development of children. Attention is focused on the confusion in the parents and children, projection and compensation for guilt feelings, retaliation by the use of children, feelings of helplessness and magic in the children and their wishes to reunite the parents, the effects of relocation and the influence of internal realignments on external realities. The initial emotional response is that of separation anxiety; with the divorce finalization there is a mourning reaction, which varies according to the child's age, sex, level of psychosexual development, previous history and current arrangements. Some understanding and definite guidelines to visitation rights, parental dating, and remarriage are considered. If in spite of their own emotional upheaval the parents are alert to the child's anxiety or depression they may be able to institute prophylactic measures. This requires parental cooperation.

Who's In The News?

Doctor Kenneth F. Kimball, Kearney, was a guest speaker at the recent meeting of the Rehabilitation Association of Nebraska.

Doctor Meyer Beber, Omaha, recently announced his retirement as Administrator of Douglas County Hospital.

Doctor Charles A. Longo, Bellevue, has been elected President of the Bergan Mercy Hospital medical staff.

Doctor Marvin E. Holsclaw, Auburn, has been elected to active membership in the American Academy of General Practice.

Doctor H. A. Blackstone, Bridgeport, was recently re-elected to serve on the Wyo-Braska Boy Scout Council.

It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precaution, and side effects.

The Journal assumes no responsibility for drugs and other products listed here.

Medical lamps

A line of three Sightmaster multi-purpose medical lamps has been introduced by Art Specialty Company, Chicago. The incandescent lamps are designed to provide maximum safety, as well as cool, concentrated light for use in medical examining and treatment of patients in hospitals, institutions or nursing homes, and medical, optical, or dental offices. The lamps are available through medical supply dealers, or Flexo International Corp., 3720 Milwaukee Avenue, Chicago, at a price range from $28.50 to $39.95.

The Sightmaster Model 7000 (left) is completely flexible in height, reach, and shade movement. An eight-inch shade with an inner-reflector air chamber allows for easy, cool handling. The lamp can accommodate sun or infra-red bulbs. It has an adjustable height from 22 to 61 inches and an arm projection to 18 inches. Construction features an all-chrome finish. Suggested price is $39.95.

The Sightmaster 7005 (center) emits concentrated light. A parabola 6½ inch shade revolves around an enclosed wire housing. The adjustable height ranges from 40 to 66 inches, and the flexible arm extends to 18 inches. The lamp is finished in chrome. Suggested price is $28.50.

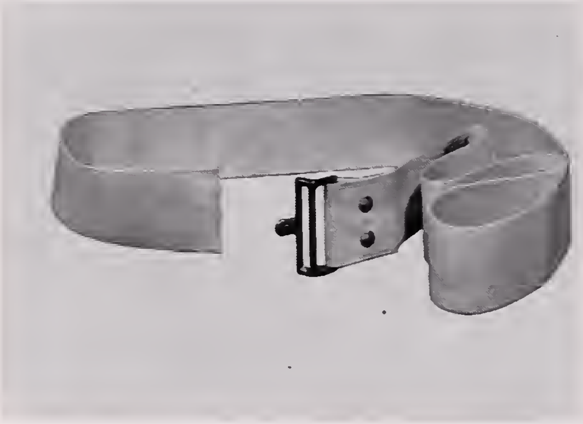
The Sightmaster 7009 (right) features a specially designed shade for cool handling and concentrated light. It can be used with sun or infra-red bulbs. Height adjusts from

42 to 72 inches, and a flexible arm extends to 18 inches. The chrome finished lamp sells at a suggested price of $29.95.

Chloromycetin ophthalmic solution

Parke, Davis & Company announce the addition to its product line of a new form of its broad spectrum antibiotic Chloromycetin. The new item will be called Chloromycetin Ophthalmic Solution.

Joseph D. Williams, Group Vice President of Corporate Marketing, said that the new product is supplied as a sterile solution in a 5 ml squeeze-dropper package. Included in the package is a transparent plastic vial to enable the patient to see the contents, and an outer ultraviolet-resistant amber shell to protect against light.



Snubber belt

The Posey Company is now offering an all purpose safety belt, the Posey Snubber Belt, for use on guernies, stretchers, or in the emergency room. This new, versatile, completely washable product is made of 3″ wide cotton webbing and is 54″ long. The Posey Snubber Belt has a completely adjustable snubber buckle which allows quick and easy adjustment anywhere on the belt. The Posey Snubber Belt #5163-6528 is priced at $9.00. Orders and inquiries regarding this product should be directed to your local hospital supplier, or the Posey Company, 39 South Santa Anita Avenue, Pasadena, California 91107.

Wyeth-repository corticotropin

Wyeth Laboratories has added repository corticotropin injection U.S.P., 40 U.S.P. units (1.0 ml.) and 80 U.S.P. units (1.0 ml.) to its Tubex line of unit dose medications in pre-filled sterile cartridge-needle units. The new product is supplied in packages of ten Tubex units.

Air cystometer

An air cystometer recently introduced by Modern Controls, Inc., of Minneapolis, Minnesota, provides a new method to evaluate bladder function. This cystometer was designed to the specifications of Dr. Daniel Merrill at the University of Minnesota. Preliminary clinical studies in over 1000 patients have shown air cystometry to be a safe, rapid, and accurate test.

Until recently, water cystometry was the standard method of evaluating bladder function. Water cystometry, however, was time consuming and required considerable pretest preparation. As reported by Dr. Merrill, at a recent meeting of the North Central Section of the American Urological Society, air with low viscosity permits rapid distension of the bladder through small single lumen catheters without viscous drag artifact. Dr. Merrill also pointed out that the speed of the test and the use of small catheters provides for the first time a practical clinical method to evaluate bladder function in infants and children.

Air cystometry requires no preparation other than catheterization so the test may be performed in the ward and clinic as well as in the cystoscopic suite, thus, making the best use of medical facilities and paramedical personnel.

The air cystometer provides a continuous recording of intravesical pressure changes on a 8½x11 inch form which may be placed directly in the patient's chart. Pertinent precystometric data, sensory changes, and the cystometric evaluation are also recorded directly on the cystometrogram. The cystometer features a built-in mercury manometer for easy calibration and variable flow rates from 0 to 150 ml per minute. An exchangeable fiber tip pen assures a continuous recording free of ink skips.

Complete information on the Mocom-Merrill Cystometer may be obtained from Modern Control, Inc., Minneapolis, Minnesota.

GE monitoring system

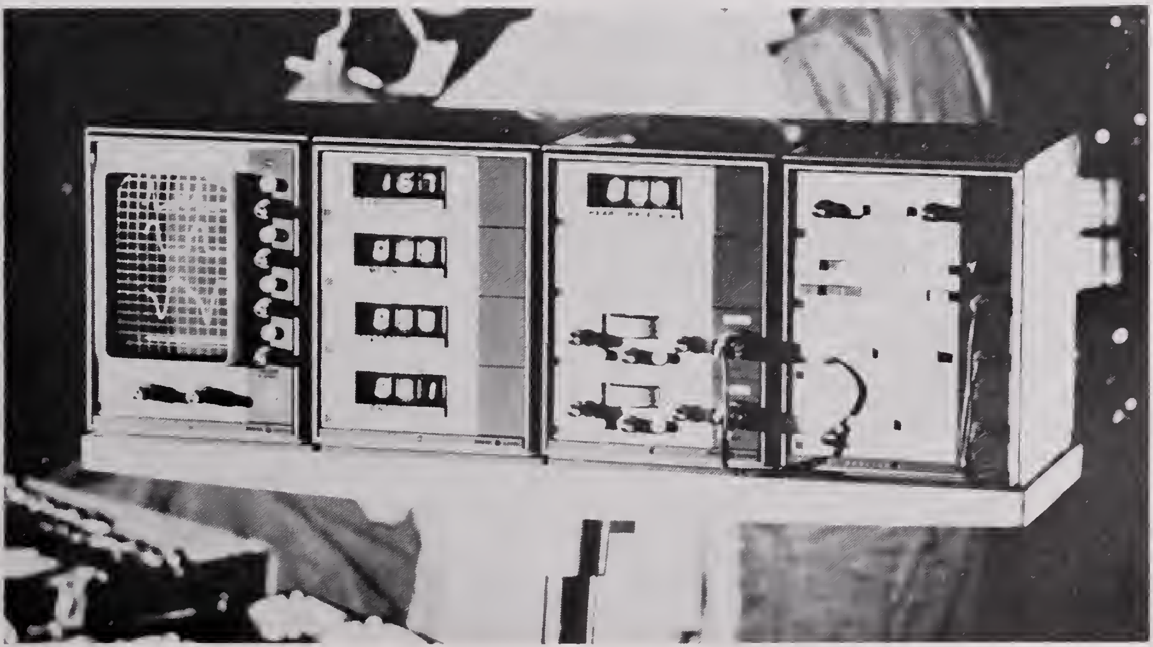
General Electric's new surgical patient monitoring system is specifically designed for operating room applications. The fully mobile system, featuring four-channel scope and digital displays, is compatible with surgical procedures.

The four-channel, lighted-graticule scope provides *real time* information for ECG, arterial pressure, peripheral pulse and EEG. Each channel utilizes a highly-visible trace with individual intensity control. A self-sensing intensity control automatically adjusts for ambient light.

This GE system also incorporates digital displays of systolic, mean, diastolic and venous pressure, and heart rate. Each display is continuously updated to reflect any changes which occur, and each can be read at a glance from fifteen feet.

An integral part of the surgical monitoring system is GE's new optically-coupled ECG amplifier. This feature increases electrical safety since direct electrical connections between the patient and earth ground are eliminated. Two monitoring modes, "line frequency filter" and "diagnostic," permit complete operating flexibility. "Line frequency filter" rejects 97% of all 60 Hz interference; "diagnostic" expands the unit's frequency response to provide diagnostic quality ECG monitoring.

GE's exclusive QRS recognition circuitry, designed to minimize false alarms, is an integral part of the ECG amplifier. Built-in protection against defibrillator overload, as well as automatic fast recovery following defibrillation, increases the safety and reliability of the unit.



An EEG amplifier, peripheral pulse amplifier and two blood pressure amplifiers complete the system. Couplings are provided for remote display and a permanent graph record.

The entire modular system is shelf-mounted on a mobile, five-foot stand. The system is mounted at a 10° angle, assuring comfortable viewing of the scope and displays. The shelf can be rotated 20° in either direction for optimum visibility. All patient cables are contained in a single cable sleeve.

For more information, write General Electric Company, Medical Systems Department, 4855 Electric Avenue, Milwaukee, Wisconsin 53201. In Canada, write General Electric Medical Systems Limited, 3311 Bayview Avenue, Toronto, Ontario.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—
February 20 — Elks Lodge, Hastings
March 20 — Elks Lodge, Broken Bow
March 27 — St. Catherine's Hospital, McCook

RURAL HEALTH — 24th National Conference; Atlanta Marriott Motor Hotel, Atlanta, Georgia; March 25-26, 1971; sponsored by the AMA Council on Rural Health.

MIDWEST CANCER CONFERENCE — 23rd annual, presented by the Kansas Division of the American Cancer Society; Broadview Hotel; Wichita, Kansas; March 26-27, 1971. All physicians in the midwest are invited, free registration, AAGP credit. Write to: American Cancer Society, Kansas Division, 824 Tyler Street, Topeka, Kansas 66612.

SOUTHWESTERN SURGICAL CONGRESS, 23rd Annual Meeting — April 19-22, 1971; Caesar's Palace Hotel, Las Vegas, Nevada. Write to: Jack A. Barney, M.D., Secretary-Treasurer, Southwestern Surgical Congress, 301 Pasteur Building, Oklahoma City, Oklahoma 73103.

NEBRASKA STATE MEDICAL ASSOCIATION — 103rd Annual Session, April 25-28, 1971, Omaha Hilton Hotel, Omaha, Nebraska.

AMERICAN MEDICAL ASSOCIATION — Annual Convention, Atlantic City, New Jersey, June 20-24, 1971.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting, House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28 - December 1, 1971.

Blood Sugar and Insulin Response of Humans in Shock — L. C. Carey (Univ of Pittsburgh School of Medicine, Pittsburgh 15213), B. D. Lowery, and C. T. Cloutier. Ann Surg 172:342-350 (Sept) 1970.

Humans in traumatic hypovolemic shock develop severe hyperglycemia within minutes, the magnitude of which is related to the severity of the shock. The blood sugar falls gradually but is still high after five hours. There appears to be a relationship between the pattern of decline of blood sugar and survival. Serum insulin in man is unresponsive to the hyperglycemia of shock, and serum insulin suppression does not resolve after resuscitation.

Medicinews

AHA appoints Dr. Crosby

The American Hospital Association's Board of Trustees has named Edwin L. Crosby, M.D., to the position of Executive President of the organization, which represents more than 7,000 hospitals and health care institutions.

Dr. Crosby's previous title was director and executive vice president. He will continue as the chief executive officer of the AHA, a post he has held since 1954.

Coronary heart disease program

A major, federally-financed program to prevent coronary heart disease in the United States was recommended by 100 medical authorities commissioned to develop guidelines for prevention of cardiovascular diseases and for treatment and rehabilitation of patients.

The proposal, by the Inter-Society Commission for Heart Diseases Resources, recommended:

1. That large, government-supported studies be conducted to determine once and for all whether a change in diet can prevent premature coronary heart disease.
2. That Americans, meanwhile, make "safe and reasonable" changes to achieve a low-saturated fat, low cholesterol diet because so much evidence already points to the diet's implication in the large number of heart attacks in the U.S.A.
3. That the food industry make major revisions in food processing to moderate fat and cholesterol content.
4. That laws governing food labeling be reviewed and updated so that the consumers can be better informed as to the fat content of purchased foods.
5. That every effort be made to eliminate cigarette smoking as a national habit.

The Commission specifically recommended that "adequate resources of money and manpower be committed" to effect the change in diet, eliminate cigarette smoking and control high blood pressure, which it called the three major risk factors associated with coronary heart disease.

The recommendation came in a 43-page position paper issued by the Inter-Society Commission. This group includes representatives from 29 leading medical and nursing organizations and experts with special knowledge of cardiovascular diseases.

Population study

The Ford Foundation and Rockefeller Foundation jointly announced a competition for research awards totaling up to $700,000 to encourage the systematic study of population policy issues by social scientists and lawyers.

The aim is to acquire basic knowledge and informed analysis on the interrelations between population variables and law, economic policies, and social and political change.

Among the possible areas of investigation suggested in an announcement of the competition by the foundations are: the implications for population growth or decline of the changing status of women; migrations from rural areas to cities; the demographic effects of laws relating to abortion, marriage age, and divorce; and the possible consequences for particular nations of zero population growth.

Medicine at the University of Nevada

The first 24 persons who will study medicine at the University of Nevada, Reno, will begin their studies in the new two-year curriculum of the School of Medical Sciences in September of this year, and will be joined by another 36 students a year later.

Each year thereafter, 48 new students are to be admitted.

All but one of the students in the first class are Nevada residents. Eight are from Reno, eight from Las Vegas, and seven from elsewhere in Nevada. The lone out-stater is a girl from Idaho.

More than 1,000 applications were received for the 24 positions, 130 from Nevadans and the rest from 45 states, the District of Columbia, Canada and several other nations.

Artificial lungs

Artificial implantable lungs for humans will not be feasible in the foreseeable future, according to the National Society for Medical Research.

"There are studies underway with laboratory animals which have provided hope for eventual use. In our opinion, however, the problems inherently associated with successful implantation of a lung in a human being will take many additional years of study," they said.

One of these problems, explained the group, is related to incompatibility of the surface of the apparatus to surrounding blood. As a result, laboratory animals have not survived long enough to be really encouraging due to the development of blood clots. Substances containing blood thinning agents are now being considered for coating the artificial lung to reduce this incompatibility, but this may also cause complications such as excessive bleeding.

Another problem has been that the artificial lung compresses the other lung causing respiratory failure. Advanced designs of the "lung" may eliminate this difficulty.

"There are several other factors, such as a need for new and additional instrumentation connected with the device, which must be perfected before we can approximate a time for human use," said the Society.

In spite of difficulty, the group strongly endorses further animal experimentation toward a workable artificial lung system.

The Funny Bone

The Chart.

"Patient received bullet wound in the left flank which subsequently resulted in a resection of his right kidney."

It's possible, but I don't believe it.

How Much Do You Weigh?

"Twenty-two."
"Twenty-two?"
"Yes, twenty-two."

Department Of Definitions.

Excise tax: tax for excising.

Remember?

Vacant lots.

Slow Death Of The English Language.

"If you want to cliche' that."

The Oldest Medical Joke.

The doctor had just delivered a baby, and it was the day after Christmas. He asked the mother, "Is it the 26th?" And she said, "No, it's only the seventh."

Pet Peeve.

Boos at a ball game.

—F.C.

Stimulation of Pancreatic Secretion by Intraduodenal Infusion of Bile Salts — K. G. Wormsley (Maryfield Hosp, Dundee, Scotland). Lancet 2:586-588 (Sept 19) 1970.

Powerful stimulation of pancreatic secretion in man has been evoked by infusion of bile salts into the duodenum. This may represent a further mechanism for integrating the functions of pancreas, biliary tract, and small intestine.

Down Memory Lane

1. How to treat syphilis has been in every textbook for all ages. It has consisted of instruction to rub on some mercury and take some iodide of potash — and trust in God, I suppose.

2. All cases of arthritis should be regarded as chronic where the symptoms have extended beyond one year.

3. To interrupt pregnancy prior to the period of viability for any reason whatsoever other than to safeguard the life of the mother is a moral, ethical, and legal crime.

4. Up to the date this goes to the printer there have been introduced bills of interest to the medical profession as follows: That regular graduates of medicine shall be given licenses without examination; to regulate maternity hospitals; to regulate children's homes; to license midwives; marriage law requiring medical examinations of both parties; forbidding the sale of venereal disease "cures"; restricting sale of poisons; stringent rape law; sterilization of rapists; new incest law; concerning illegitimate children.

5. French observers have previously called attention to the relation of the thyroid gland to chronic arthritis.

6. Many say that State Medicine will be a good thing.

7. The question is, does Eberth's bacillus attack other lymphoid tissues than the intestines? Are these so-called cases of grippe or catarrhal fever really typhoid fever?

8. During this year, as above indicated, our attention has been called to an abortion case, and one for practicing without a license, both of which we thought we should enter. We believe the fee splitting law is also being violated.

Nebraska State Medical Journal
February, 1921

Therapeutic Abortion — E. C. Senay (950 E. 59th St, Chicago 60637). Arch Gen Psychiat 23:408-415 (Nov) 1970.

Women seeking abortion on psychiatric grounds are in human crisis. The majority who have abortions in licensed hospitals have few short-term, and rare long-term psychiatric sequelae. High-risk cases may undergo exacerbations of preexisting psychotic pathology during the crisis surrounding abortion. Suicide, while not frequently encountered, is frequently entertained by these patients and occurs often enough to create genuine clinical concern. Abortion is contraindicated in women who seek abortion not because they desire to be aborted but because they want to comply with the wishes of someone else. Such patients are candidates for crisis intervention and not abortion. There is an inhibition of normal fantasy processes about the fetus in women seeking abortion. Their mourning process, therefore, is unique and less liable to become pathologic than in other situations.

Splenomegaly in Analgesic Takers — J. M. Duggan (Royal Newcastle Hosp, Newcastle, NSW, Australia). Med J Aust 2:580-584 (Sept 26) 1970.

Details are presented of the cases of ten patients who took large quantities of analgesics in the form of APC powders. Each had splenomegaly not readily explained; its observed duration varied from weeks to years. It is suggested that this is the human counterpart of the hemolytic state with splenomegaly regularly observed in rats administered phenacetin. In humans, the basic hemolytic state is exacerbated by the analgesic nephropathy. The typical patient is a cyanosed, neurotic, middle-aged hypertensive patient taking five or six APC powders a day. The spleen is just palpable below the left costal margin, proteinuria is almost invariable, methemoglobinemia is frequent and one third of the patients have peptic ulcer.

Our Medical Schools

Cholesterol study at Creighton

The ability of an enzyme in blood plasma to control the buildup of cholesterol esters in blood and tissues will be studied at Creighton University School of Medicine under a grant received from the John A. Hartford Foundation, Inc., of New York City.

Ibert C. Wells, Ph.D., Chairman of the Department of Biochemistry, will conduct the studies under a two year award of $35,860 announced jointly by Foundation President Harry B. George and Dean Joseph M. Holthaus of the School of Medicine.

Dr. Wells pointed out that in atherosclerosis the deposit of lipids such as cholesterol in arteries destroys the elasticity of the artery wall. As a result, the individual's blood pressure may rise or the artery wall may rupture. In some instances those deposits may completely block the passage of blood and cause failure of an organ such as the heart.

Present biochemical evidence indicates that at least part of the deposited cholesterol comes from the blood stream where the chemical make-up is thought to be controlled by the enzyme lecithin: cholesterol transacylase. The activity of this plasma enzyme can be controlled by diet, hormones and the administration of certain drugs.

The Creighton University biochemist will investigate the specificity of the role of the plasma enzyme in the development of atherosclerosis. Methods will also be developed to measure the activity of the enzyme in plasma to serve as a useful and specific index of atherogenesis. Drugs and other measures designed to prevent atherosclerosis could also be based on the necessity of maintaining this enzyme in blood plasma at low concentrations commensurate with its normal physiological functions.

From the Editor

Certified medical representatives

Graduation of the Third Class of The Certified Medical Representatives Institute took place on November 20, 1970. Forty-three pharmaceutical representatives from A. H. Robins Company, Warner-Chilcott Laboratories, Dorsey Laboratories, Syntex Laboratories, CIBA Pharmaceutical Company and Warner-Chilcott Laboratories Co. Limited received the professional designation of C.M.R. —Certified Medical Representative.

The purpose of the C.M.R. designation is to offer qualified pharmaceutical representatives the opportunity to earn recognized professional stature in their industry. Thus, the C.M.R. is to the pharmaceutical industry what the C.L.U. (Chartered Life Underwriter) is to the insurance field, the C.P.A. (Certified Public Accountant) is to the accounting field and the C.F.A. (Chartered Financial Analyst) is to the securities business. Each is recognized in his particular industry as an individual who through specialized study on his own time is able to render more meaningful service.

New standards for accreditation

At its December 12, 1970 meeting, the Board of Commissioners of the Joint Commission on Accreditation of Hospitals gave final approval to the revised Standards for hospital accreditation, according to the Joint Commission's Director, John D. Porterfield, M.D. In taking this action, the Board stipulated that the Standards be implemented as the basis for accreditation three months after their publication. The document is scheduled to be published by

April 1, 1971, and a single copy will be sent without charge to all registered hospitals in the United States and all accredited hospitals overseas.

U.S. mortality: 1970

One of the better years for life! That's how 1970 is viewed by the statisticians of Metropolitan Life Insurance Company who report that the mortality rate in the United States was slightly lower in 1970 than in 1969. They estimate the 1970 national death rate at about 9.4 per 1,000 population compared with 9.5 in 1969. This represents the 23rd consecutive year in which a death rate below 10 per 1,000 population was registered in this country quotes Metropolitan Life.

Infant mortality, which recorded a low of 21 per 1,000 live births in 1969 may show another low in 1970. Infant mortality may for the first time in this country drop to less than 20 per 1,000 live births in 1970. The infant mortality rate in the U.S. may show nearly a 25 percent decline from 1960 to 1970, compared with a decline of only 11 percent from 1950 to 1960.

Diseases of the heart, which are currently responsible for nearly two fifths of all deaths in this country, showed a slightly lower mortality rate in 1970 than in 1969. The rate for ischemic type of heart disease, mainly coronary heart disease, decreased from a year ago by about 1½ percent. No significant change in the mortality rate from cerebral vascular disease was noted, according to the statisticians.

Cancer, which runs second to heart disease as a cause of death, continued its gradual uptrend, showing a mortality rise of approximately 2 percent in 1970 from the year earlier. This small rise likely reflects an increase in the death rate from cancer of the respiratory system.

Diabetes mortality showed a slight increase in 1970, while the death rate from cirrhosis of the liver was up by 6 percent.

A sizable decline in the mortality rate from influenza and pneumonia (a figure which often varies materially from year to year) is expected. A mortality rate of about 30 per 100,000 is estimated for 1970 — about 15 percent below that in 1969. The decline represents a return to more usual levels from the high influenza death rates which prevailed in early 1969.

Provisional data indicate that the number of motor vehicle accident fatalities in 1970 declined by about 2 percent from 1969. The death toll from all types of accidents combined is also likely to be lower than in 1969.

The Law

Family practice clears senate

The Senate adopted the Conference Report on S. 3418, Training in the Field of Family Practice . . . The bill provides assistance to medical schools to establish and operate separate departments devoted to the teaching of all phases of family practice. It also calls for the construction of necessary additional facilities as well as the operation of special training programs in family practice for paramedical personnel. Provisions are made for financial support for programs in public and private non-profit hospitals for the training of medical students, interns, residents and practicing physicians in the field of family medicine . . . Authorized for fiscal year 1971 is $50 million, $75 million for fiscal 1972 and $100 million for fiscal 1973. To qualify for a grant a medical school would have to assure the Secretary of HEW that there would be a separate department of family medicine and that it would be of equal standing in the school with other departments devoted to the teaching of medical specialty disciplines. An additional $8 million is authorized to assist medical schools in the planning and development of programs or projects which are designed to carry out the purposes of this bill . . . During Congressional consideration of this bill one amendment was added which authorizes the Secretary of HEW to conduct a study of the feasibility and desirability of establishing in the medical schools courses dealing with nutrition and problems related to malnutrition, and establishing research programs and projects in the field of nutrition and malnutrition.

Social security bill to the floor

The Senate Finance Committee completed consideration of H.R. 17550, the Social Security Amendments of 1970. In addition to a proposed increase in Social Security cash benefits, the bill contains, among other provisions, amendments to Medicare (including coverage of chiropractic services) and Medicaid, a catastrophic health insurance program, Senator Bennett's amendment for Professional Standards Review Organizations (PSRO), and an amendment to the Foreign Trade Act . . . The bill is not expected to reach the floor of the Senate for a few days, at which time there is expected to be an attempt to add the Administration's Family Assistance Plan as an additional amendment to the bill . . . Doubt is increasing in Washington that there will be sufficient time, before the December 19th scheduled adjournment, for the Senate to act on the bill, for a Conference Committee to resolve differences between the House and Senate versions, and for the Congress to act on any Conference report. One possible result is that only a Social Security cash benefit increase will survive the legislative process and be enacted during the 91st Congress.

Direct health care by PHS

The House Interstate and Foreign Commerce Committee has favorably reported H.R. 19860, the Emergency Health Personnel Act of 1970. The bill authorizes the use of U.S. Public Health Service personnel in areas which the Secretary of HEW determines have critical health manpower shortages. These assigned personnel would provide health care which is presently authorized by the Public Health Service, as well as services authorized under any health care program carried out in whole or in part with federal financial assistance, and other services in furtherance of the program . . . The bill requires, however, that a state or local health agency or other health organization would have to request public health service personnel to come into the area and would further require a certification to the Secretary by the state and district medical societies of the area and by the local government that these health personnel are needed.

Safety packaging approved

The House passed S. 2162, the Poison Prevention Packaging Act of 1970 which calls for the Secretary of HEW to establish standards for special packaging if he finds that the hazard of the substance contained in the package is so great that special packaging is required in order to protect children. The bill provides that in the case of conventional packages, a substance could be packaged without compliance with the special packaging standards if the product is available in at least one popular size of special packaging and if the non-complying packages are conspicuously labeled to indicate that the product is available in a special package. Substances which are dispensed by prescription could be sold in conventional packages only upon the direction of the physician or upon the request of the purchaser . . . The bill now goes to Conference.

Acute Granulomatous Disease of Liver — A. M. Gelb et al (345 W 50th St, New York 10019). Amer J Dig Dis 15:842-847 (Sept) 1970.

Liver biopsy in two patients with acute febrile illness and hepatic involvement revealed epitheloid and mononuclear cell granulomas throughout the liver. Both patients had lymphocytosis and atypical forms in the peripheral blood. Heterophile antibody titers, performed multiple times in the course of their illnesses, were normal. Both patients recovered, one after three weeks and one after six.

The Letter Box

Dear Dr. Cole:

The National Center for Health Statistics, as part of its continuing program to provide information on the health status of the American people, is currently planning a National Ambulatory Medical Care Survey (NAMCS). The purpose of this survey is to collect objective, quantitative information to measure and describe the types of ambulatory patients seen by physicians, the nature of patients' problems and the resources available for their care.

The success of NAMCS depends on the cooperation of practicing physicians who are the major source of this information. In October 1969, we conducted a feasibility study which demonstrated that a high rate of participation can be obtained. Currently, a second test study is being planned to develop sound methodology and to refine procedures and definitions. The second survey will be conducted early in 1971 among a sample of 800 physicians selected randomly across the country.

The NAMCS has received the enthusiastic support of many prominent members of the medical community and major medical organizations. In addition, the American Medical Association is taking an active part in the forthcoming test survey by providing technical consultation and assisting in the induction of sample physicians into the survey.

At this stage of the NAMCS development, it is quite important to make the medical community aware of the survey and the support it has been given by the AMA and other medical organizations. Therefore, I request that you include in the next issue of your publication a statement summarizing the survey's objectives and general procedures. A draft of such a statement is enclosed.

Sincerely yours,

James E. DeLozier
Health Service Officer
Health Fac. Statistics Branch
Div. of Health Res. Statistics

NATIONAL AMBULATORY MEDICAL CARE SURVEY

The National Center for Health Statistics in the Department of Health, Education, and Welfare, as part of its continuing program to provide data on the health status of the American people, is currently planning the National Ambulatory Medical Care Survey (NAMCS). The purpose of the NAMCS is to collect objective, quantitative information which can be used to describe the types of ambulatory patients seen by physicians, the nature of the patients' problems and the resources for their care. This information is needed by leaders in medicine and related professions for planning and organizing health services, for planning efficient utilization of health facilities and manpower, and for determining modifications in medical education.

The survey will involve a national sample of physicians who will be requested to provide data concerning a small number of the ambulatory patients they see. When the NAMCS is in full operation (sometime in 1972), about 3,000 physicians each year will be providing data on an estimated 240,000 ambulatory patient visits. Physicians selected to participate in the survey will provide information concerning a sample of the patients that they see during a two-day period in each of four consecutive calendar quarters. All physicians will be replaced by new sample physicians after participating for four quarters. The types of data the survey will collect include age, sex, and medical problems of patients plus treatment prescribed and laboratory tests performed for patients. Of course, all data will be held completely confidential and used only for statistical purposes.

Ambulatory medical care is by far the largest segment of the American health services system in terms of prevalence and volume. Yet, little has been done on a national scale to gather reliable information for use in planning and research. The dearth of information on this subject has led leaders in the medical profession to persuade the National Center for Health Statistics to undertake the National Ambulatory Medical Care Survey. This information will complement the health data already being obtained by the Center through its ongoing national surveys: the Health Interview Survey, Health Examination Survey, and Hospital Discharge Survey. The success, of the NAMCS, of course, will depend on the cooperation of practicing physicians who are the major source of ambulatory medical care data.

The American Medical Association and numerous other major medical associations have expressed their support for the NAMCS and have provided advice and consultation in its development. With the cooperation of practicing physicians the survey will provide very valuable data for documenting the health status of the American people and for informing public and private policy decisions.

Announcements

Genetic research

New means of conquering hereditary diseases through genetic manipulation will be a forerunner in basic medical research during the next decade, according to the National Society for Medical Research. "The effects of genetic alteration upon such diseases as diabetes, hemophilia, and certain emotional disorders may be under study in sophisticated and promising stages of laboratory animal experimentation by 1980," they said, "which will provide the platform for further advances in the future."

Citing recent studies by Dr. Bernard D. Davis of Harvard, the group noted major deterrents to the application of genetic control over such human traits as intelligence, temperament and physical structure lie in differences between "monogenic" and "polygenic" traits. Monogenic traits, such as eye color and various hereditary diseases, result from genes which individually exert an all-or-none control over the trait. Polygenic traits depend on multiple genes and thus vary continuously rather than in an all-or-none manner. "Even should scientists eventually develop the ability to incorporate genes into human germ cells, and thus repair monogenic defects, we would still be far from transferring the large blocs of genes needed to specify highly polygenic behavioral traits," reported Dr. Davis.

Another deterrent is that differences in behavior depend very much on differences in the wiring diagrams of our individual brains, and added genes could not be expected to influence this wiring diagram unless put into the germ cell before development. In contrast, a gene for supplying a missing product, such as insulin, could conceivably be effective whether introduced into a germ cell or into a fully developed individual.

"Education on the distinctions between monogenic and polygenic inheritance is of extreme importance if the public is to distinguish between realistic and wild projections for future developments in genetic control in man," the Society explained.

Four easy steps to collecting from the army

Here are four easy steps for members of the civilian medical profession to take in billing the Department of the Army for professional services rendered to military personnel requiring emergency treatment while absent on authorized leave from their duty stations.

Step 1. *Identification.* All members of the Army, who are on active duty, should be carrying some sort of identification showing their full name, rank or grade, social security account number or service number, and duty station. This may be an Armed Forces Identification Card, an authorized pass, official orders, Request and Authority for leave (DA Form 31) or travel orders. This document should be copied and retained for use when submitting the bills for service.

Step 2. *Notification.* It is very important that the patient's whereabouts and physical condition be made known immediately to the nearest Army Surgeon's Office (listed below) when emergency civilian medical treatment is required. The telephone call may be made by the patient or a member of the hospital staff. A record should be made of the date and time of the notification, as well as the name of the headquarters called, and the full identification of the person accepting the call for the Army. The cost incurred in notifying the military authority is a legitimate charge to the Army, and should be included with the medical bill. (Personal calls made by or for the patient for other purposes cannot be collected from the Army).

Step 3. *Billing.* The bill should be submitted in quadruplicate showing *all* the information acquired in Step 1. With the inclusive dates of service, the bill should list the individual charges for each type of service (ambulance, diagnostic, medical, surgical or other) together with a signed certificate embodying the following statement: "I certify that the services were necessary in the treatment of the above named person; that the services were as stated; and the charges are not in excess of those customarily made in this vicinity."

Step 4. *Mailing.* The bill should then be mailed to the appropriate Army Surgeon for the area in which the service was rendered. The addresses are listed below.

Headquarters Fourth U.S. Army

Commanding General
Fourth United States Army
Attn: Surgeon
Fort Sam Houston, Texas 78234

Telephone Number

Area Code 512
Duty hours: 221-4323 or 221-2013
Off-duty hours: 221-2745

Geographical Area

Arkansas, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Nebraska, New Mexico, Oklahoma, Texas, Wisconsin

Joint commission appoints

Reed M. Nesbit, M.D., has been named Associate Director of the Joint Commission on Accreditation of Hospitals, according to an announcement by John D. Porterfield, M.D., Director.

Dr. Nesbit, who is retiring chairman of the Joint Commission's Board of Commissioners and a representative of the American College of Surgeons on that Board, assumes his staff responsibilities January 1, 1971.

The new Associate Director is Professor Emeritus in the Department of Surgery, University of Michigan Medical School at Ann Arbor. Since his retirement from the faculty of the University of Michigan Medical School in January 1968, Dr. Nesbit has been affiliated with the new medical school at the University of California at Davis, serving as lecturer in surgery and as consultant to the Dean. In accepting his new position with the Joint Commission, Dr. Nesbit has been granted a leave of absence from his medical school responsibilities with the concurrence of Dean John Tupper.

Dr. Nesbit is a Diplomate of the American Board of Urology and a former regent and past president of the American College of Surgeons. He has served on the Joint Commission's Board of Commissioners since 1960, and has been chairman of the Board since 1968.

Medicare charges

Regulations to be issued shortly will update the charge data used as a basis for determining physicians' reimbursement under Medicare.

Beginning with bills received January 1, physicians' customary charges during 1969 will be used in arriving at the "reasonable charge" — the amount that will be the basis for Medicare payment.

The regulations will also set the 75th percentile of physicians' charges in a locality as a general limit on the amount that Medicare will recognize as a reasonable charge. This means that Medicare will base its payment on the full charge billed by a physician if that charge is no higher than 75 percent of the customary charges made by all physicians in the locality for the particular service or medical procedure.

If, for example, three-quarters of the fees for office visits being charged by doctors in a locality range between $8 and $12, then the Medicare "reasonable charge" would be whatever the physician customarily charged his patients — up to the $12 level. In the case of a charge above $12, the basis for Medicare reimbursement would be $12. Medicare would pay 80 percent of that "reasonable charge."

Where the doctor has taken an assignment — where he has agreed to bill the Medicare program and be paid direct — he also agrees to accept the "reasonable charge" as his full charge and to bill the patient for no more than 20 percent over the Medicare reimbursement. More than three out of five Medicare bills for physicians' services are paid on assignment.

Medicare payments before January 1 are governed by 1968 charge data, with the limit set at the 83rd percentile or its equivalent.

Under legislation passed by the House of Representatives last May, and recently agreed to by the Senate Finance Committee, the 75th percentile of physicians' customary charges was to be used this fiscal year preliminary to a major change which would permit future recognition of only those increases in physicians' fees that could be justified by economic indexes showing changes in the costs of practice and in professional earnings levels in the locality.

The new regulations while moving to the 75th percentile do not involve the use of the index as provided in pending legislation.

Send For It

Pulmonary function

A new leaflet on the NCG pulmonary function indicator is available from the National Cylinder Gas division of Chemetron Corporation.

Features such as portability, direct readings to eliminate operator calculations, and accuracy of testing are described in the two-page leaflet. The PFI measures peak flow, FEV_1, FEV_3, VC and FEV_1 per cent of total and FEV_3 per cent of total from a single forced exhalation.

Write National Cylinder Gas Division of Chemetron Corporation, 840 North Michigan Avenue, Chicago, Illinois 60611.

Respiratory Diseases

PULMONARY SARCOIDOSIS: A PROSPECTIVE EVALUATION OF GLUCOCORTICOID THERAPY

Data in this first controlled prospective study on the therapeutic effects of glucocorticoids on pulmonary dysfunction in sarcoidosis failed to yield any significant evidence that this therapy produces beneficial change in pulmonary function.

The efficacy of gluococorticoid therapy in the treatment of pulmonary dysfunction in sarcoidosis is still questionable despite numerous reports detailing its use.

It has been suggested that to be effective adrenal corticoids should be given early on the theory that, if administered during the acute phase of illness, they may reduce inflammatory reaction and thereby prevent or, at least, curtail fibrosis.

Although amelioration of symptoms and improvement in chest roentgenographic abnormalities have been confirmed, pulmonary functional changes have been variable. However, previous studies of pulmonary function have been retrospective and often lacked suitable controls.

PROSPECTIVE CONTROLLED STUDY

The present study of 25 patients with proven sarcoidosis and pulmonary dysfunction was undertaken four years ago to pursue a prospective controlled investigation — with the results available at one to two years — on the effects of glucocorticoid therapy on pulmonary function in early sarcoidosis.

The average age of the 20 males and five females in the study was 26. Duration of illness was determined to be less than one year for 21, less than two years for three, and less than three years for one.

The diagnosis of sarcoidosis was based on the presence of noncaseating granulomas in either lung, lymph node, or Kveim test biopsy, together with clinical characteristics of sarcoidosis and the exclusion of other diseases. Fifteen patients had noncaseating granulomas shown on one biopsy (10, lung and five, scalene node). In the remaining 10, noncaseating granulomas were found at two or more sites.

PULMONARY DYSFUNCTION

The only significant pulmonary function abnormalities found were a decreased lung diffusion capacity (DL_{co}) abnormal, arterial oxygen tension (Pao_2), decreased total lung capacity (TLC), and/or forced vital capacity (FVC).

Criteria for inclusion in the study were an abnormal DL_{co} ($DL_{co} > 2$ standard deviations (S.D.) beyond normal) an arterial PO_2 of less than 80 mm Hg at rest or after exercise. (Ten patients on glucocorticoid therapy with normal function studies were followed serially but not considered for the treatment protocol.)

Presence of any concomitant disease that could affect pulmonary function excluded a patient from the protocol as did previous glucocorticoid therapy.

Patients meeting the study criteria were assigned to a control or treatment group on an alternate basis: 12 patients to the control group and 13 to the treatment group.

Treatment consisted of 15 mg prednisone four times a day for one month and five mg four times a day for at least an additional five months. Isoniazid chemoprophylaxis was not given. To date no patient in the treatment protocol has developed tuberculosis.

All patients were evaluated between one and two years after entering the protocol. In addition, 19 were evaluated at six months after entering the study; seven, at one to two months. There was no significant change in the pulmonary function studies at one to two months, six months, or at the end of one to two years in either group.

STUDY RESULTS

Prospective alternate-case treatment of patients with sarcoidosis showed no beneficial effect of prednisone on the pulmonary function abnormalities studied. Although the group studied was not large, the treated and untreated patients were initially similar in every value measured. They had disease of relatively short duration and showed predominantly inflammatory changes on percutaneous needle lung biopsy. Thus, theoretically, they were the best possible candidates for steroid therapy. The dose of prednisone used was high enough and of sufficient duration to cause facial changes consistent with Cushing's syndrome in every patient. In general, the pulmonary function values remained stable in both the treated and untreated groups.

Although an occasional favorable response was noted, it was either so slight or occurred so infrequently that it did not affect the overall results in the treated group when compared with the untreated control group. Individual evaluation of each case did not show any dramatic improvement in a treated patient which was not matched by similar changes in an untreated patient; nor was any deterioration of pulmonary function observed when glucocorticoid therapy was discontinued.

One treated patient who maintained a relatively stable course for six months deteriorated progressively thereafter in spite of continued prednisone therapy. Previous reports of such deterioration after glucocorticoid therapy has been discontinued may have represented the natural course of the disease and not an effect from the steroids.

In earlier studies of small numbers of patients whose pulmonary function was evaluated, only the "sickest" patients generally were treated with steroids. Beneficial effects from this therapy have been confined largely to changes in vital capacity or involved a single case, and/or studies have been retrospective or with very brief follow-up.

In the present series, the patients with the more severe functional abnormalities were not found to be any more responsive to therapy than those with milder defects. Moreover, improvement in some control patients was comparable to that of patients who improved while taking glucocorticoids.

The combined experience from the literature indicates that when glucocorticoids are given to severely ill patients symptomatic and roentgenographic improvement may occur; the number of such patients in the present study and in any series.

It should be noted that the information in this study does not pertain to the treatment of extrapulmonary sarcoidosis. The major objective of this study was to define the effect of adequate glucocorticoid therapy on pulmonary function in patients with "early" sarcoidosis.

If steroids are to be used in treating pulmonary sarcoidosis it should be with the realization that, while symptoms and chest roentgenograms may improve, significant permanent improvement in pulmonary function or alteration in the ultimate course of the disease by early steroid therapy has not been documented.

—Lt. Col. Robert L. Young, USAF, MC, F.A.C.P.; Maj. Lionel E. Harkleroad, USAF, BSC; Maj. Robert E. Lordon, USAF, MC, and John G. Weg, M.D., F.A.C.P., Annals of Internal Medicine, August 1970 (Vol. 73, No. 2).

Echographic Diagnosis of Pancreatic Lesions

— R. A. Filly and A. K. Freimanis (Ohio State Univ College of Medicine, Columbus 43120). Radiology 96:575-582 (Sept) 1970.

A study of 37 cases of proved or suspected pancreatic disease indicates that "B" mode contact echographic scanning is useful in the detection, diagnosis, and delineation of extent of pathologic processes in the pancreas. Pancreatic edema, pseudocysts, and carcinomas have been successfuly detected. The echographic picture frequently is characteristic.

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Physicians' Classified

Advertisements in this column are at a rate of ten cents per word with a minimum of $4.00 per insertion. Copy must be received by the fifth of the month preceding date of publication and should not exceed 50 words. Advertisements from members of the Nebraska State Medical Association will be accepted without charge for one issue. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

CLINIC AVAILABLE — General practice in furnished clinic. County seat town, SW Nebraska. 3 nursing homes in town, good territory. Write Box 8, Beaver City, Nebraska.

FOR RENT — A retiring physician wishes to rent his well equipped office to another physician or specialist. Large rural community including eight towns without physicians. Town, 7000, good hospital. All sports. Contact: Ray S. Wycoff, M.D., 106 West 7th Street, Lexington, Nebraska 68850.

YOUNG G.P. needs help in small Western Nebraska ranch town. Part-time, locum tenens, partnership, you name it. Low tempo general practice with office attached to good short care and long care facilities. Unlimited recreation in area. Contact: Joe Saults, M.D., Mullen Clinic, Mullen, Nebraska 69152, 308-546-2213.

WANTED — M.D. wants to be medical assistant to older or busy M.D. Nebraska license. Diplomate of national boards. Good character. No smoking or drinking. 3 years general practice. Residency 2 years internal medicine. Contact Box 26, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

PHYSICIAN interested in returning to Nebraska to practice. 1959 Creighton University graduate has practiced in Illinois for 10 years and desires general practice opportunity in the state of Nebraska. Holds Nebraska license. For information contact Box 25, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

WANTED — General Practitioners in the "Heart of the Black Hills." Well established community with a population of about 2,500, service area of about 6,500. A modern 16-bed general hospital constructed for easy expansion if necessary. At present we have one General Practitioner in town. Our 78-year-old doctor passed away recently. The staff will cooperate fully as desired. The State Hospital for the Severely Mentally Retarded is located 5 miles south of town. Large medical centers are 45 minutes away. For more details contact: D. C. Kanwischer, Administrator, Custer Community Hospital, Custer, South Dakota 57730.

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Long-acting Hygroton offers a gentle flow
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HY-7764-9

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CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
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ADVICE TO AUTHORS

The Editor of this Journal assumes no responsibility for opinions and claims expressed in the articles published herein.

Manuscripts to be presented for publication in the JOURNAL should be typewritten, double-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8½ by 11 in.) white paper. Wide margins (at least 1¼ in. on left) should be left free of typing. On the first or title-page should be shown the title of the article, the name (or names) of the author, his degree and other significant credits. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the Journal's address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.

Medicinews . . .

AMA appoints nurses

A panel of Registered Nurses representing nine diverse nursing areas has been appointed by the Board of Trustees to serve as advisors to the American Medical Association Committee on Nursing.

At their first meeting with the Committee, April 23-24 in Carmel, Calif., the panel will provide Committee members with current information on important trends and problems in nursing. Edmund D. Pellegrino, M.D., of State University of New York, is chairman of the Committee.

AMA's program activities to increase the significance of nursing as a primary component in the delivery of medical service include: (1) Support of efforts to increase the number of nurses, (2) Expansion of the nurses' role in providing patient care, (3) Encouragement and support of all levels of nurse education, (4) Development of a hospital nursing service aimed at increased involvement in direct medical care of the patient.

Send For It

Cardiac catheterization guide

A new booklet intended to assure patient and personnel safety in performing cardiac catheterization as well as to promote maximal diagnostic accuracy, obviate unnecessary procedures and minimize the need for repetition, has been published by the American Heart Association.

Entitled "Standards for a Cardiac Catheterization Laboratory — A Guide for Cardiologists and for Institutions Sponsoring Cardiac Catheterization Laboratories," the report was prepared by the Association's Council on Rheumatic Fever and Congenital Heart Disease and Council on Clinical Cardiology.

Copies of the booklet may be obtained from the Nebraska Heart Association, 4155 Dewey Avenue, Omaha, Nebraska 68105.

Radiation protection

The publication of new radiation protection standards was announced recently by the National Council on Radiation Protection and Measurements (NCRP). NCRP Report No. 39, *Basic Radiation Protection Criteria,* was released at a Press Conference held in Washington, D.C.

The new report represents a revision and modernization of radiation protection standards formulated by the NCRP in 1954 and revised in 1957 and 1958.

Individuals already on the NCRP Publications Standing Order List will receive copies of the new report automatically and be invoiced for their order. Others may purchase copies of NCRP Report No. 39, *Basic Radiation Protection Criteria* for $2.00 each from NCRP Publications, P.O. Box 4867, Washington, D.C. 20008.

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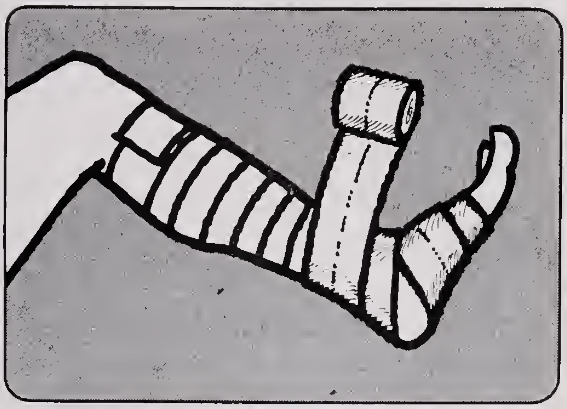

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Produced by The Upjohn Company, Kalamazoo, the film shows how expert hands can use lasers with startling effectiveness in procedures ranging from prevention of blindness in diabetics to removal of brain tumors, and even skin tattoos.

The 19-minute film, titled "Clinical Applications of Lasers," was produced as a professional service by Upjohn for viewing by audiences in the medical fields. In full color, with sound, it is the eleventh offering in The Upjohn Vanguard of Medicine® series. The 16 mm. film is available on a temporary free-loan basis. Requests for prints, listing alternate dates, should be addressed to Upjohn Professional Film Library, 7000 Portage Road, Kalamazoo, Michigan 49001.

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**Clark, F., and Horn, D. B.: Assessment of thyroid function by the combined use of the serum protein-bound iodine and resin uptake of ^{131}I-triiodothyronine, J. Clin. Endocrinol. *25*:39 (Jan.) 1965.

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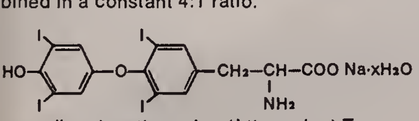

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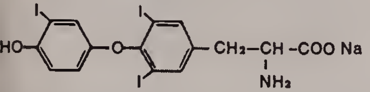

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Indications: Euthroid (liotrix) provides thyroid replacement therapy in all conditions of inadequate production of thyroid hormones, namely:

1) Hypothyroidism, including cretinism and myxedema.
2) Simple (nontoxic) goiter.
3) Subacute or chronic thyroiditis including Hashimoto's disease.
4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3, T_4, and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

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Euthroid-½ pale orange	(30/7.5)	½ grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

*T_4=sodium levothyroxine (*l*-thyroxine)
**T_3=sodium liothyronine (*l*-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: *Symptoms*—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

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Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
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Medicinews . . .

Articles for heart meeting

Abstracts of papers and applications for cardiovascular films and scientific exhibits to be presented at the American Heart Association's 44th annual Scientific Sessions must be postmarked by June 4, 1971. The meeting is scheduled from Thursday, Nov. 11, through Sunday noon, Nov. 14, in Convention Center, Anaheim, Calif.

Papers intended for presentation must be based on original investigation in the cardiovascular or related fields. The project's results and the investigator's conclusions should be summarized in the abstract and must be submitted on official AHA forms.

Official forms for submitting abstracts, films and scientific exhibits may be obtained from the AHA's Department of Medical Education, 44 East 23rd St., New York, N.Y. 10010.

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THE NEBRASKA STATE MEDICAL JOURNAL

DRUG PANELISTS MISS THE BOAT

I have listened to drug panel discussants and I have watched them on television. They are usually with young people at the time, and in their desire to communicate with them, and in their fear of antagonizing them, I think they too often do more harm than good.

A 16-year-old is always sure to ask if marihuana should be legalized since you can buy alcohol. The expert at these sessions willingly goes down the primrose path. We are told that we know little about marihuana, that drunken drivers kill people, and that youngsters today are beset by problems. One infers that marihuana is harmless, that we have been talking about alcohol, and that young people are understandably driven to use drugs. And we find ourselves being critical of parents, not children.

The panelist often adds something like this. Aspirin is a drug, he says, and people have come to grief over aspirin, sleeping pills, laxatives, tranquilizers, and pep pills. I am addicted to drinking, water, that is; and to eating and breathing. I have read too many articles saying that marihuana is not harmless. There is a world of difference between an adult having a cocktail before dinner after a hard day's work, and a teenage dropout dying of an overdose of heroin.

Parental discipline was sterner when I was younger. Allowances and automobiles were luxuries we only read about. Our problems, and those of the generations that preceded ours, were no less intense than those alluded to by the teenagers and by the expert who so readily agrees.

Teenagers may not buy or drink alcohol, and no one argues with this, but experts agree they may need to turn to marihuana or worse. We are a drug-oriented society, they tell the youngsters, see how much aspirin we use.

Well, aspirin isn't pot, and alcohol isn't heroin, and a child is not an adult. The drug panelist often misses the boat, and misses, too, his chance to do good when he curries favor as he "communicates." I get along with the kids just fine, he may think, but what good does it do? What they need is, as Antony said, "sterner stuff."

I remember the cigarette-holding expert at the conference on smoking. When the drug discussion is over, you may find the panelist at the bar, and ask him one more question. Like "What are you doing here?"

Tell it like it is.

—F.C.

GOOD-BYE, HIPPOCRATES

Hippocrates lived in the late fifth century B.C. The oath we take that is attributed to him has stood the test of time for well over two thousand years, but it is no longer possible for a student to recite the oath on his graduation day.

On campus unrest and student riots: "to consider dear to me as my parents him who taught me this art."

On euthanasia, on transplant donors, and on needlessly keeping alive the incurably ill: "to please no one will I prescribe a deadly drug."

On fee-splitting: "to share my goods with him."

On contraception and on abortion: "nor will I give a woman a pessary to procure abortion." When I was in school, abortion was a dirty word. Now, in many places, you may perform abortion, and in some instances, you must.

On professors' salaries: "to teach them this art if they so desire without fee."

On house calls: "in every house where I come."

On homosexuality: "the pleasures of love with women or with men."

On social reform: "be they free or slaves."

On religion, and on monotheism, atheism, and agnosticism: "all the gods, all the goddesses."

On the law, privileged communication, and court orders: "I will keep secret."

Queen Victoria said "I will be good." Nothing about fee-splitting, ghost surgery, incompetence, or malpractice.

If you mumble the Oath of Hippocrates now, you're a hypocrite.

We need a new oath.

—F.C.

HYSTERECTOMY AND THE D & C

A dilatation and curettage is routinely done immediately preceding vaginal hysterectomy; it is not usually performed before abdominal hysterectomy. If the curettage before vaginal hysterectomy is to discover cancer and to irradiate before, or instead of, further surgery, I suggest that none of this has anything to do with the indications for vaginal and abdominal hysterectomy.

A small uterus is taken out from below, and curettings are examined. A large uterus is removed abdominally, and curettage is seldom performed.

I wonder, then, at what seems to be a complete lack of logic in vaginal hysterectomy with D&C, and abdominal hysterectomy without it.

Maybe the reasoning goes something like this: the uterus is small, so we'll take it out vaginally, and now that she's in a position for D&C, let's do one.

—F.C.

A Note on Cancer Control

HENRY T. LYNCH, M.D.
Professor and Chairman,
Department of Preventive Medicine and Public Health
Creighton University School of Medicine

AT a recent meeting of the American Society of Internal Medicine in Philadelphia, Pennsylvania, emphasis was placed upon the challenge to physicians to improve the quality of care to their patients. This challenge concerned the pressing problem of non-cooperation of patients. For example, physicians were admonished to be more patient and understanding. Specifically, "If we get a dumb answer from them (patients), maybe we asked a dumb question." It was further stated that the most important single test of a good physician was whether he could elicit his patient's cooperation.

This message is of extreme practical importance particularly as it applies to cancer control throughout the world. We have been interested for a number of years in the problem of patient delay in seeking care for cancer symptoms.[1-5] We have found that the psychodynamics involved in the problem of delay are deep-seated and are modified heavily by prevailing attitudes about cancer which are for the most part of a stereotyped nature, which promotes fear, bewilderment, anxiety, apprehension, and downright avoidance of physicians for fear that he might find a tumor. Practically speaking, it is difficult to change long-standing attitudes of adults. However, looking ahead, we believe firmly that a real challenge to the physician lies in stimulating positive attitudes and philosophy about cancer in our *youth*. Specifically, we believe that education about cancer early in the academic experience of a student could be extremely profitable, possibly at the grade school or early high school level, when the student first encounters general science and biology. At the time when he learns to identify and comprehend the living cell, he could be shown cancer cells simultaneously, so that he might see the disorderly nature of aberrant DNA as it exists in cancer. A physician might show him some of the clinical aspects of cancer stressing the positive aspects of cancer control through *early cancer diagnosis!* The student should be encouraged to discuss cancer issues freely, and should be shown at this time that his best ally in conquering cancer is his family physician. Moreover, he should learn that many cancers can be cured if the diagnosis is made early in the course of the disease.

Pursuant to the above, the Department of Preventive Medicine and Public Health at Creighton University School of Medicine is initiating a program wherein junior and senior medical students will visit local schools annually as volunteers, to talk to students about cancer, to discuss objectively the biological aspects of cancer, its social ramifications, focusing attention upon the known problem of *fear* of cancer as it exists in our society and the negative consequences of this through delay in cancer diagnosis.

We believe that such a program could be adopted by physicians in every community throughout Nebraska; furthermore, we believe that school authorities would cooperate with this venture, and that the end result could be better patient communication with their physicians in seeking care for early signs and symptoms of cancer. As we visualize this, it would require only about one hour per year of the physician's time. This department will be happy to provide assistance, including teaching material to interested physicians.

Since to date cancer control has shown little advance in the past several decades, primarily due to patient reluctance to see a doctor earlier, we believe that this innovative approach could reap gratifying rewards with improved cancer control.

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A Medical Emergency Communications Net for Nebraska

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THE concept of a single radio frequency for use in Emergency Medical Communications was considered at the time of the development of a total communications network in the state. A place for it was put on the Nebraska Consolidated Communications Network.

Much discussion was carried on regarding the advantages and disadvantages of one frequency over another but because of the fact that most emergency radios in the state were already on the sheriff's frequency, and because of the advantage of having the capability of communication between the ambulance and the sheriff in times of emergency, the low band frequency of 39.82 mhtz was chosen. This allowed the conversion of much present equipment by the simple exchange of crystals and insured communication to the local sheriff's office in nearly every area in the state.

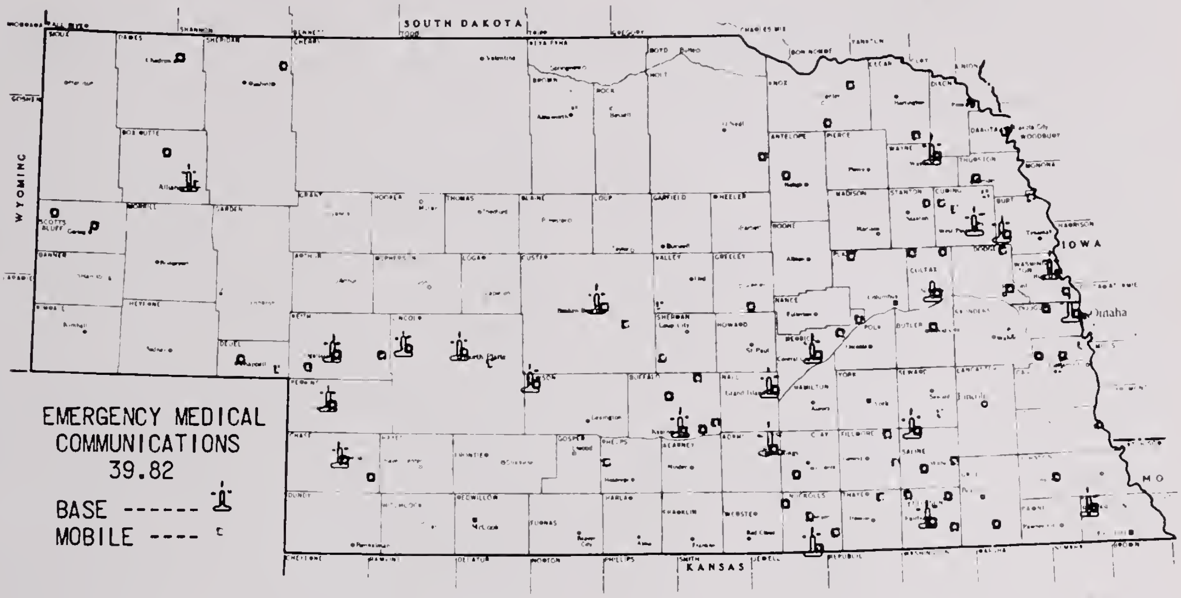
The concept of the medical network is that any ambulance from anywhere in the state may operate in its own area, may move to another area in time of emergency, and may move across the state while transporting a patient to one of the major medical centers, always being able to maintain radio communication with the local hospitals should help or direction be needed. The closeness of the radio frequency to that used by the sheriff's net allows the ambulance personnel to talk to the police for direction, escort, or support, by the simple flipping of a switch.

All hospitals have been encouraged to place base radio stations in their emergency rooms, so that the ambulance personnel may communicate directly with the nurse or doctor at the hospital. This allows the ambulance personnel to receive direction when needed, and also allows the hospital to know the number of persons coming in, the physician to be called, the extent of injury, and whether or not other personnel should be on hand when the ambulance arrives.

The base stations at the hospital are all assigned a number which may be dialed from the ambulance. The hospital radios are quiet except when called, thus preventing bothersome noise to hospital personnel when the frequency is used by others. The power of the units is intentionally limited so that there is a minimum of interference between different towns. Where long range communication is needed, the state microwave system will be used and is already set up so that it may accept and drop out calls on this band during times of emergency.

Many communities have taken advantage of the matching funds provided under the National Highway Safety Act whereby half of the money is provided by the community and half by the D.O.T. Such grants have to meet certain state requirements so that they are compatible with the Nebraska Communications Network. Information on this program is available from Mr. Milton Parker, Department of Health, Lincoln, Nebraska.

The use of such a system allows movement of ambulances from one community to another in times of disaster while insuring their ability to communicate anywhere in the state. It allows direct access by radio from the ambulance to the hospital personnel and physicians in times of need. It utilizes much of the existing equipment. It is programmed to work with the Consolidated Communications System. It allows ambulance personnel to talk to the law enforcement agency in any area in the state during times of emergency. It may just be that such a system could save lives in your own community.



Management of Obstructive Bronchopulmonary Disease*

PART I

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THE care of acute and chronic obstructive lung disease is often neglected[1] because its cause is unknown, its manifestation is varied, its progression is relentless, and its cure is unknown. During the last three decades, however, a considerable progress has been made in the elucidation of pathophysiology and the assessment of effective means of treating obstructive bronchopulmonary disease (OBD). It is the purpose of this paper to present the current status on the management of OBD in a concise form to aid those physicians who are interested in this disease. When proper treatments are used wisely, a large number of patients can be helped to a remarkable extent. Let us now review 15 measures available to us.

1. *Diagnostic Workup*

In the management of pulmonary patients, one of the first steps to be taken is (a) to obtain an accurate history, and (b) to perform a comprehensive physical examination. The onset and duration of dyspnea on exertion must be scrutinized, the amount and duration of smoking has to be known, and the quantity, color, and duration of sputum production are carefully documented along with the history of allergies. The patient's occupation is asked in detail to establish a possible source of exposure to chemical fumes or industrial dust. During physical examination, the status of patient's body habitus, whether he is lean or plethoric, must be noted, along with the absence or presence of cyanosis. The quality of breath sounds, whether they are distant or close, must be carefully mapped throughout the chest along with rales, wheezing, or rhonchi. At the same time, the intensity of the heart sounds, in particular that of the pulmonic second sound and its splitting, is examined in relation to possible pulmonary hypertension or bundle branch block. The history of ankle edema must be questioned, although the patient may be well compensated at the time of examination. The absence or presence of clubbing in the fingers or toes has to be noted also.

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The next important step in the diagnostic workup is (c) radiological evaluation which requires posteroanterior as well as lateral chest x-ray films. In the majority of obstructive bronchopulmonary disease, the chest x-ray film will provide suggestive evidence of hyperinflation of the lung with the following characteristic features: namely, increased AP diameter, flattened diaphragm, elongated heart, and diminished peripheral pulmonary blood vessels. An additional useful modality, which is available in most of the large medical centers, is the lung scan, which shows irreversible filling defects of varying degree. A serial determination of the lung scan has shown that the filling defect is irreversible in pulmonary emphysema while it is often reversible in asthma.

No less essential than the radiological evaluation are (d) the routine laboratory tests, which include electrocardiogram, CBC, sputum stain, culture and sensitivity test, skin tests for typical and atypical mycobacteria, histoplasmosis, coccidioidomycosis, and blastomycosis. The serum enzyme study is of value in acute respiratory failure in differentiating myocardial infarction from pulmonary thromboembolism. In this regard, SGOT, SGPT, CPK, and LDH are valuable tests. Recently, alpha$_1$ antitrypsin deficiency has been shown to occur in some patients with obstructive bronchopulmonary disease. It is believed to be genetically related and seen often in panlobular type of pulmonary emphysema. The level of Alpha$_1$ antitrypsin is extremely low in the homozygous patients.

The establishment of a diagnosis of OBD requires (e) a comprehensive lung function study, which can be divided into three sections: i.e., the spirometric measurement, the arterial blood gas analysis, and the measurement of pulmonary diffusion capacity. In essence, the spirometric measurements involve (1) the quantitation of the degree of airway obstruction (by means of timed forced expiratory volume), (2) the assessment of restrictive impairment (employing the measurement of the vital capacity), and (3) the measurement of lung volume, particularly the residual volume (to quantitate the extent of hyperinflation or deflation). In the early stage of OBD, the degree of airway obstruction varies greatly from mild to severe, and usually there is no restrictive impairment as reflected in the vital capacity. However, with the progression of the disease, the fixation of the chest cage develops and the vital capacity begins to show a reduction, and restrictive as well as obstructive components become apparent.

No less important is the analysis of arterial blood gas in terms of oxygen saturation, CO_2 tension and pH. Quite often patients may have only a mild reduction in the arterial oxygen saturation with no disturbance in the arterial CO_2 tension or pH. However, in the advanced stage, both hypoxemia and CO_2 retention are often present, and in acute respiratory failure, there is a marked reduction in pH indicating respiratory acidosis. In the management of OBD, a serial determination of the arterial blood gases is essential because it is one of the best guides in determining the efficacy of treatment.

The lung function study is incomplete without *reliable* measurement of pulmonary diffusion capacity. The technique of pulmonary diffusion capacity measurement is relatively new and it requires a great deal of technical skill and experience. When it is done properly, it will serve as a valuable means of differentiating pulmonary emphysema from bronchial asthma. Pathologically speaking, pulmonary emphysema is a destructive disease, while bronchial asthma in its pure form does not involve destruction of pulmonary parenchyma. In patients with a long history of bronchial asthma, the critical question is whether the patient also has secondary involvement of destructive element of pulmonary emphysema. It has been the author's experience that the pulmonary diffusion capacity is invariably reduced in pulmonary emphysema while in bronchial asthma, even with severe airway obstruction, the pulmonary diffusion capacity is essentially normal.[4]

The pulmonary diffusion capacity is not only a valuable tool in the differential diagnosis of pulmonary emphysema from bronchial asthma, but also in the diagnosis of pulmonary granulomatosis and fibrosis. This is particularly so in the "alveolar capillary block" syndrome which includes sarcoidosis, rheumatoid lung disease, the Hamman-Rich syndrome, etc. In the "alveolar capillary block" syndrome, the only abnormal feature in the lung function test may be the diminished diffusion capacity while the spirometric measurement and the arterial blood gases are virtually normal.

Functionally speaking, respiration may be divided into three phases: ventilation, diffusion, and perfusion. Among these, the phases of ventilation and diffusion are relatively easy to investigate and reasonably well understood. The phase of perfusion, however, has been poorly understood in the past because it is technically more difficult to evaluate than the phases of ventilation and diffusion. The advent of right heart catheterization, which was originally developed by the pulmonary physiologists, has opened a fertile field of investigation of pulmonary perfusion and it is now possible to evaluate the mechanical properties of pulmonary circulation in detail. These include the measurements of cardiac output, cardiovascular pressure, and pulmonary vascular resistance. An additional value of this technique lies in the fact that it allows us to study the shunting of blood, which may exist in congenital or acquired lung disease.

It is now well established that the patients with OBD gradually develop pulmonary hypertension on account of hypoxemia, acidemia, and possibly also due to a gradual diminution of the pulmonary capillary bed. In contrast to the systemic hypertension, the pulmonary hypertension in OBD is reversible when the contributing causes such as hypoxemia and acidemia are controlled by effective treatment.

Unfortunately, in a certain number of patients with OBD, the hypoxemia may be due to a direct shunting of blood from the right to the left through the foramen ovale. Therefore, in selected cases of patients with pulmonary hypertension and cor pulmonale, the right heart catheterization is indicated to evaluate the degree of shunting as well as the degree of pulmonary hypertension. Another useful diagnostic modality currently available in chest disease is the selective pulmonary angiogram which is particularly useful in the elucidation of pulmonary thromboembolism or congenital pulmonary vascular anomalies.

In the management of OBD, it is often helpful to differentiate patients into groups A & B.[2] This differentiation, as proposed by Nash, Briscoe, and Cournand, is based on the following ten clinical and laboratory criteria: (1) cough, (2) sputum, (3) dyspnea, (4) breath sounds, (5) body habitus, (6) lung field on chest x-ray film, (7) diaphragm, (8) size of heart, (9) congestive heart failure, and (10) hematocrit. As shown in Table 1, the group A patients have occasional bouts of cough, mostly in the morning, and the sputum is scanty, usually less than 1 oz per day. The shortness of breath is steady and increases slowly. The breath sounds are distant, and body habitus is lean. The chest x-ray film shows hyperlucent lung fields throughout the entire chest and the diaphragm is low and flat. The cardiothoracic ratio is less than 1:2.5, indicating a heart of small size. There is no history of congestive heart failure, and the hematocrit remains within normal limits, usually below 50%. In contrast to this, the group B patients have frequent spasmodic coughs, and produce copious sputum amounting to several ounces per day. The dyspnea is not steady, but fluctuates with weather, infection, etc. The breath sounds are nearly normal, the body habitus is nor-

Table 1

CLASSIFICATION OF OBD
TEN CLINICAL CRITERIA

		Group A	Group B
1.	Cough	occasional bouts in a.m.	frequent, spasmodic
2.	Sputum	scanty (<1 oz/d)	copious (several ozs/d)
3.	Dyspnea	constant, slowly increasing	fluctuate with weather, infection, etc.
4.	Breath sounds	distant	nearly normal
5.	Habitus	thin	normal or stout
6.	Lung field	translucent (all zones)	normal
7.	Diaphragm	low, flat	normal
8.	Size of heart (C/T)	<1:2.5	>1:2.5
9.	CHF	No	Yes
10.	Hematocrit	<50%	>50%

7A or more → Group A

7B or more → Group B

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mal, in general, and the diaphragm is normal. However, the cardiothoracic ratio is greater than 1:2.5, and patients frequently have a history of congestive heart failure. The hematocrit is often greater than 50%, indicating polycythemia. As shown in Table 1, seven or more criteria must be met to be designated as either group A or group B. In practice, the value of such classification lies in the fact that the therapeutic approaches are somewhat different between the two groups. In group B, there is a great deal of bronchitic element, which requires judicious use of antibiotics, bronchodilators, expectorants, and bronchial hygiene, together with the occasional use of digitalis and phlebotomy. On the other hand, there is little evidence of bronchitis in group A and the alveolar ventilation is reasonably well preserved. A study of pulmonary ventilation and hemodynamics in OBD[5] reveal that group B has a high cardiac output with a normal or reduced alveolar ventilation, while in group A, the cardiac output is reduced below normal with an increased alveolar ventilation. Therefore, the ventilation perfusion ratio (Va/Q) is high in group A and it is low in group B.

The prognosis of OBD in relation to the above two types is not well established. It is the author's experience, however, that not infrequently, group B responds to the treatment to a remarkable extent, because effective means are available in controlling infection, hypoxemia, acidemia, and polycythemia.

2. *Avoidance of Respiratory Irritants*

The second measure of importance in the management of OBD is the avoidance of respiratory irritants. The majority of patients with OBD have a long history of smoking, sometimes quite heavy. Since it has been clearly shown that the smoking causes a significant reduction in lung function, the physician must be firm in relating the harmful effect of smoking to the patients. It appears that smoking not only causes a significant disturbance in the ciliac action of the bronchial mucosa, but also influences the pulmonary capillary flow. Although the direct cause-result relationship has not been established between smoking and OBD, the fact that a high incidence of OBD is prevalent among smokers suggests a significant correlation between the two. Not only smoking, but also the dusts in the environment, the chemical fumes, and sometimes the cold air cause a great deal of irritation of respiratory airways. A patient with OBD must be advised to avoid all sorts of respiratory irritants as much as he can.

3. *Use of Antibiotics*

The third measure in the management of OBD is the controlled use of antibiotics. Since it is well known that chronic bronchitis is almost always present among patients with OBD, the sputum stain and the culture and sensitivity test should be done routinely in the control of infections of the respiratory tract. Although tetracycline is often used for the treatment of respiratory infection, this is basically a bacteriostatic drug with weak action. More potent bacteriocidal preparations, such as penicillin and ampicillin are better choices in the management of chronic bronchitis. In patients with penicillin sensitivity, erythromycin is equally effective and in the debilitated patients with a long use of antibiotics, the gram negative infection is not infrequently encountered. In such a case, the use of kanamycin, colistin or gentamicin is recommended with careful attention to the side-effects of the respective drugs.

4. *Administration of Bronchodilators*

The fourth measure of importance is the use of bronchodilator preparations by either intravenous infusion or oral route. There are numerous bronchodilators available on the market. The 1970 PDR lists 84 preparations under the heading of "Bronchial Dilators!" Some of these preparations include only a single ingredient while others contain two, three, or four ingredients, such as expectorants and sedatives. Aminophylline is used in Amesec, and theophylline is the main component in Tedral and Quibron, while oxtriphylline is used in Choledyl and Brondecon. The bronchodilator is most effective when its plasma level is maintained throughout a 24 hour period. For that reason, these preparations are given usually four times a day in chronic patients, or in continuous intravenous drip in acute cases.

5. *Aerosol Inhalation*

There is an unfortunate trend among some patients to rely heavily on aerosol treatment. It is now well known that a long-term use of isoproterenol preparation may cause a "paradoxical reaction," namely, bronchoconstriction rather than bronchodilation. Therefore, it is advisable to limit the use of aerosol inhalation to a minimum. In terms of tachycardia, isoetharine preparation appears to be least harmful among three major aerosol preparations, i.e. isoproterenol (Isuprel Mistometer), racemic epinephrine (Vaponefrin), and isoetharine (Bronkosol).

6. *Steroid Therapy*

Not infrequently, the use of steroids is rewarded with a significant improvement in the symptoms. This is particularly so in acute respiratory failure. In acute asthma attacks, for example, hydrocortisone may be used in a large quantity intravenously until the wheezing subsides. In the management of chronic form of bronchial asthma, however, prednisone is given by mouth for a long period of time with proper attention to the well known side-effects of steroid therapy.

7. *Use of Expectorants*

Sputum production may be aided by judicious administration of expectorants Among these, most commonly used reagents are iodides (SSKI) ammonium chloride (Benylin), ipecac (Phenergan), and glyceryl guaiacolate (Robitussin). In a patient without a thyroid condition or an allergic diathesis to iodine, SSKI is widely used. However, ammonium chloride, ipecac, and glyceryl guaiacolate are also effective in the improvement of expectoration.

8. *Management of Hypoxemia*

In the advanced stage of OBD, a disturbance in the arterial blood gases becomes apparent. To manage hypoxemia, the concept of controlled oxygen therapy is becoming popular. By controlled oxygen therapy it means that the amount of inspiratory oxygen concentration is known. Since ambient air contains 20.94% oxygen, the use of gas mixture with oxygen content slightly higher than the ambient air is sufficient enough to elevate the level of arterial oxygen tension to normal without causing undesirable CO_2 retention. A recently popular device is the Venti-mask, which supplies a known amount of oxygen to the patient at 24%, 28%, 35%, or 40% levels. In the author's experience, the Venti-mask works well without causing excessive CO_2 retention in many cases of respiratory failure. Its disadvantage, however, is that the patient is unable to eat or talk with his family while he is on the mask. For this reason, a simple device such as the nasal cannula with an O_2 flow of two to five liters per minute is often used. The latter, of course, has the advantage of being simple to use, allowing the patient to maintain conversation and being able to have oxygen while eating.

The patients with hypoxemia often manifest secondary polycythemia. In such a case, phlebotomy has to be performed because of the known threat of thromboembolic phenomenon. Not infrequently, a patient is seen with a hematocrit exceeding 60% and sometimes even 70%. In such a case a phlebotomy of two or more pints is recommended. It must be remembered, nevertheless, that the real treatment of secondary polycythemia is in the improvement of the arterial O_2 saturation to a normal level.

Endocarditis — Clinical Findings And Management

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and
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Etiology

THE basic lesion of endocarditis is a friable, verrucous 3 layered vegetation. The inner and thickest layer consists of fibrin, collagen and necrotic blood elements, the middle layer is made up of bacteria, and the outer layer of bacteria and loose fibrin strands. Most cases of endocarditis are due to bacteria, but fungi and rickettsiae may be responsible.

Sterile endocarditis may persist after successful treatment of infected heart valves and result in emboli. In addition, malignant disease, pulmonary emboli, pneumonia and systemic lupus erythematosus can be associated with sterile endocarditis. Emboli are at least as frequent as in bacterial endocarditis.

Prior to availability of antibiotics, when mortality was virtually 100%, a clinical separation between acute and sub-acute endocarditis was made on the basis of duration of survival. This has little merit today, although, on occasion, fulminating endocarditis is still seen with *Staphylococcus aureus* or pneumococcal infection. For practical purposes, however, all cases of endocarditis should be considered as potentially life-threatening.

Rheumatic heart disease is still the most common underlying predisposing condition. Since the mitral valve is the most commonly affected in rheumatic fever, it is most commonly involved in bacterial endocarditis; next are aortic, tricuspid and pulmonic valves in decreasing order.

Among congenital abnormalities, ventricular septal defects are the most commonly infected, then tetralogy of Fallot, patent ductus arteriosis, pulmonary, and aortic stenosis may be listed. Endocarditis may complicate coarctation and aneurysm of the aorta, arteriovenous fistulae, syphilitic heart disease, and bicuspid aortic valves. Thrombi formed by a jet of blood streaming from a high to a low pressure area can become infected. Such a jet does not occur in interatrial septal defects, nor does endocarditis.

Endocarditis may occur on normal heart valves in elderly persons, and in persons infected with *S. aureus*, pneumococci, meningococci, or brucellae.

Bacteremia is generally a necessary condition to establish endocarditis, and may result from dental extractions or cleaning of teeth, respiratory infections, pyoderma, prostatic massage, cystoscopy, urinary and cardiac catheterization, normal obstetic delivery, prolonged intravenous usage, or self-administration of drugs by the intravenous route — a current social problem. As a complication of cardiac surgery, infection introduced at the time of operation may lead to endocarditis.

When antibiotics were first introduced, the bacterial causes of endocarditis were: streptococci 62%, pneumococci 15%, staphylococci 13%, gonococci 7%, miscellaneous and multiple organisms 3%. Over the past two decades there has been a marked reduction in the occurrence of endocarditis due to gonococci and pneumococci and an increase in cases due to staphylococci, group D streptococci or negative blood cultures. The latter may represent instances of sterile endocarditis, or infections caused by organisms such as bacteroides, listeria or microaerophilic streptococci which require specialized cultivation.

The changes in organisms are attributed to antibiotic usage, long term hospitalization, aging patient population and aggressive surgical manipulation.

Clinical Manifestations

Textbook descriptions include fever, heart murmur, splenomegaly, anemia and some manifestations of peripheral embolization. The majority of patients do not manifest this clear cut picture. A recent series revealed that 75% of patients with endocarditis had no evidence of peripheral embolization, 60% had no eplenomegaly and 4% had no heart murmur.

Murmurs of endocarditis are generally insufficiency murmurs. Flow murmurs in patients with fever and anemia are often considered as evidence for endocarditis, but frequently these findings merely represent a hyperdynamic circulation. Rapidly changing murmurs are rarely evidence of endocarditis unless there has been rupture of chordae tendinae or papillary muscles, or heart failure. Changes in cardiac function alone characteristically produce changing cardiac murmurs. An infrequent cause of change in cardiac function is endocarditis. However, sudden onset of myocardial infarction or congestive heart failure in patient with previous compensated congenital or rheumatic heart disease may be the presenting finding.

Fever, the most common physical finding, may be absent for a variety of reasons including aspirin, shock, advanced age, antibiotic treatment, uremia steroid treatment, or severe infection.

Endocarditis may present as an acute fulminating illness in which meningitis, intracerebral hemorrhage, congestive heart failure, cardiac arrhythmia or uremia are prominent, and the underlying cause is overlooked. Neurologic manifestations are particularly common in the elderly, and in patients with cyanotic congenital heart disease. In such persons signs of brain abscess, toxic psychosis or meningitis may be the initial event. On occasion, peripheral embolization may be a presenting form with such manifestations as infarction of fingers, toes, nose or ear lobes. Embolization of larger blood vessels suggest fungal or *S. aureus* endocarditis; a common site of infarction is the spleen. Splenomegaly is often absent at the onset, although patients may complain of a left upper quadrant abdominal pain. Both renal embolization and glomerulitis — the latter probably autoimmune in origin — are common in cases untreated for some time. Hematuria, proteinuria and azotemia resulting from this type of involvement may lead to an initial diagnosis of glomerulonephritis or renal failure. The anemia is non-specific and is present in approximately 2/3 of the cases. It is usually normochromic, normocytic and may be associated with monocytosis

Treatment

Antibiotics either singly or in combination should be chosen for bactericidal activity against the infesting organisms. Ideally, the antibiotic should have a sufficiently low order of toxicity to permit an appropriate duration of treatment. We feel that the minimal time is three weeks. Some authors have presented good treatment results of *S. viridans* endocarditis with large doses of penicillin and streptomycin in two weeks. Tube dilutions to determine bactericidal endpoint of antibiotics on the patient's organism, and the bactericidal effects of his serum upon his organism, are helpful in guiding therapy. A bactericidal blood level, 5 times greater than the minimal *in vitro* bactericidal level, is generally sought.

When blood cultures are negative or when treatment was started before appropriate cultures have been obtained, treatment may be carried out with large doses of penicillin (12 to 20 million units a day) and streptomycin (250 mg.q.6.h.) for at least 4 weeks.

Antibiotic therapy will not improve the damaged valve, and distortion of valve function may follow healing and scarring; surgical correction may ultimately be needed. In cases of severe valvular disease and cardiac decompensation, valvuloplasty may be required. Cardiac surgery in the face of infection may be necessary. This should not be undertaken lightly, but may be the only recourse if infection is uncontrolled or heart failure due to valve damage is not controllable by medical therapy.

Management of Thoracic Trauma*

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THE rising incidence of multiple injuries demands that every physician be prepared to manage chest injuries. Chest injuries usually take precedence over other injuries after rapid evaluation and general supportive care. Avoid the Trendelenburg position. Diaphragmatic elevation comprises pulmonary expansion.

Relieve tracheobronchial obstruction immediately. Insert an endotracheal tube if the obstruction is not relieved by removal of gross foreign body and secretions. Tracheostomy is an elective procedure best performed in the operating room with adequate help, light, suction, and a controlled airway. Laryngeal injury may be the exception, and requires emergency tracheostomy.

Shock in chest injury is treated as it is elsewhere. Use narcotics and sedatives sparingly. The respiratory depression produced by these drugs is more dangerous than pain. If necessary, administer narcotics intravenously so that hypotension will not delay their effect.

Seal sucking wounds of the chest with an occlusive dressing. Closed tube thoracostomy is mandatory, because closure of the wound causes a tension pneumothorax.

Thoracentesis or closed tube thoracostomy establishes the diagnosis and treats intrathoracic pressure disturbances.

Tension pneumothorax is the rapid accumulation of air trapped in the thoracic cavity. This air enters from disrupted tracheobronchial tree, lacerated lung, or a defect in the external chest wall. The physical findings are hypotension, decreased breath sounds, and decreased chest wall excursion. Tube thoracostomy is life saving. If the air leak continues after the lung is expanded, the defect may be larger than the thoracostomy tube. Bronchoscope the patient to identify a tracheal or bronchial laceration that may require thoracotomy.

Massive hemothorax produces hypotension, dullness to percussion, decreased respiratory excursion, and decreased breath sounds over the involved side of the chest. Immediate thoracentesis or tube thoracostomy confirm the diagnosis. Tube thoracostomy evacuates the blood, and allows the lungs to expand, which produces tamponade of the bleeding site and controls hemorrhage. Remove the blood from the pleural cavity to prevent fibrothorax or empyema as late complications. Perform tube thoracostomy with a large thoracostomy tube connected to underwater seal. If massive bleeding continues, emergency thoracostomy is required to control hemorrhage. Less than 5% of patients with major chest injury require thoracostomy for massive hemorrhage.

In the flail chest, supporting ribs are fractured, and the ability to expand the under-

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lying segment of lung is lost. Internal fixation is the treatment. Intubate the trachea and place the patient on respirator breathing until the flail segment stabilizes. This provides adequate ventilation and prevents atelectasis and pneumonia. Perform elective tracheostomy after relieving ventilatory embarrassment. Tracheostomy is necessary because the patient will require several weeks of ventilation before the rib fractures stabilize. Associated injury such as tension pneumothorax is usually present.

The signs of acute cardiac tamponade are cervical vein distension, decreased heart sounds, paradoxical pulse, narrow pulse pressure, and outwardly displaced cardiac border. Diagnose and treat this condition with pericardiocentesis. Use the subxyphoid approach. Place the needle in the left xyphisterno-costal angle, and direct the needle superiolaterad beneath the sternum into the pericardium. The direct parasternal approach may damage the internal mammary or coronary arteries and enter the pleural space. The indications for pericardiotomy are continued hemorrhage, clots in the pericardial sac, or failure to relieve tamponade with aspiration. Observe the patient closely after pericardiocentesis.

Blunt injury may also damage the myocardium. Obtain an electrocardiogram and appropriate serum enzymes. Manage a myocardial contusion as you would a myocardial infarction.

Do not rely on the portable supine chest roentgenogram. With the patient in the recumbent position, layering of air and fluid may mask a significant pneumothorax or hemothorax. If the patient cannot tolerate the upright position for a 6 foot film, control the situation with closed tube thoracostomy and endotracheal intubation, and take the film after the patient's condition improves.

Mediastinal emphysema is rarely significant unless the underlying cause, such as a ruptured tracheobronchial tree or esophagus, is not corrected. Perform tracheostomy if mediastinal emphysema becomes life-threatening.

Treat rib fractures with intercostal nerve block and pain medications. Avoid external chest wall support. Decreased respiratory excursion will cause atelectasis and pneumonia.

Summary

Rapid evaluation and treatment is life-saving in thoracic injuries. This management is every physician's responsibility, and the procedures are within every physician's capability.

Hemodialysis in Infants and Children*

RICHARD F. GREMINGER, M.D.†
CHARLES M. GINSBURG, M.D.††
RANDOLPH M. FERLIC, M.D.‡
and
ROBERT D. SELLERS, M.D.‡‡
From the Departments of Surgery and Pediatrics of the University of Nebraska

HEMODIALYSIS was first described in 1913 but remained untested clinically until 1943 when William Kolff developed the rotating drum artificial kidney.[1] Today, the artificial kidney is no longer the cumbersome, prohibitively expensive machine of the 1950's. Therapy based on chronic hemodialysis and renal transplantation has extended the life expectancy of the adult with chronic renal disease.

Children with chronic renal disease have not been so fortunate. Most of them are still managed by diet and fluid restriction just as they were 20 years ago. Herdman and Najarian[2] report that only 10% of their patients who received renal transplants were children. An even smaller percentage of patients treated with chronic hemodialysis are children.

When pediatric patients have been dialyzed, they have usually been between 12 and 18 years of age, so that the problems are not too different from those encountered in the adult. The infant or small child has rarely been treated in this manner. The technical problems associated with arteriovenous shunt insertion and maintenance have prevented widespread investigation of pediatric dialysis. Where shunts have been inserted in this age group, the average shunt life has been 3 months,[3] as compared with 4 to 14 months in the adult.[4, 5] Not only is the risk of infection and the possibility of inadvertent removal or disconnection much greater in the child,[6, 7] but the obligatory use of small cannulas predisposes to shunt clotting.

Body fluid shifts are also a greater problem in children than in adults. The pediatric patient may have a blood volume only slightly larger than the usual volume of 500 ml required for priming the twin coil artificial kidney. Because of this precarious relationship, sudden alterations in pressure, volume or flow present difficulties in the infant and young child.

Preliminary work by Hutchings, Hickman, and Scribner[6] indicates that dialysis may not provide the necessary conditions for growth, sexual maturation, and psychological development in the infant or child. Renal osteodystrophy can be corrected with dialysis if hyperparathyroidism can be controlled.[3] Peripheral neuropathy is considered to be related to inefficient dialysis and has not been a significant problem in children.[3] Changes in affect and mentation can be attributed to biochemical aberrations as well as to the restrictions and concerns of chronic dialysis.[6] Although this work has been discouraging, the techniques of hyperalimentation, hormone manipulation and intensive psychological guidance have not been thoroughly investigated.

Despite the problems, we felt that something needed to be done to help the 15 to 20 children who die with chronic renal disease in Nebraska every year.[8] The Departments of Surgery and Pediatrics at the University of Nebraska have undertaken a program of dialysis of infants and small children.

Our initial objective was to establish techniques for insertion and maintenance of arteriovenous shunts in vessels of small caliber. It is important that the shunt be of sufficient caliber to allow adequate flow rates and to prevent clotting, but that it not be large enough to appreciably alter cardiovascular function. It was found, in our ani-

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mal experiments, that careful insertion and meticulous postoperative care would allow us to use shunts of much smaller caliber than have been used in adults. Infection has been implicated as a major factor in the loss of working shunts, and was the major factor in our shunt failures in animals.

Studies in animals have shown that adequate blood flow rates could be obtained with 1.9 mm internal diameter (#17 gauge) cannula, to permit dialysis. In small dogs, flows up to 145 ml/minute have been obtained through these cannulas without problems (comparable sizes in adult patients are 10-14 gauge with flow rates up to 300 ml/minute.)

The limiting factor in dialysis is not the ability to remove metabolic byproducts from the blood, but the rate at which these wastes enter the blood stream from the extravascular space. The majority of commercially available coils are high efficiency, large surface area coils capable, in children, of depleting the intravascular compartment faster than the extravascular compartment can supply wastes. Prolonged dialysis with a low efficiency system is desirable. This can be obtained through the use of the Kiil dialyzer, or through the use of a small surface area coil dialyzer. The standard coils have a surface area of at least 1 square meter. Initial studies have been carried out with the new Travenol* pediatric twin coil which has a surface area of 0.3 M^2 per half coil. These coils have not only provided satisfactory dialysis, but have reduced the volume of priming solution from the 500 ml for the 1.0 M^2 (adult) coil to 250 ml for the 0.6 M^2 (pediatric) and to 150 ml for the 0.3 M^2 coil. Using the 0.3 M^2 coil, dialysis has been safely carried out in our laboratory in 3 to 5 pound puppies at flow rates of 65 ml/minute without hemodynamic disturbances.

Our laboratory studies have demonstrated the feasibility of hemodialysis of children and infants. The answers to the problems regarding growth, development, and psychological adjustment can only be worked out clinically. The University of Nebraska Medical Center has embarked on a program of clinical investigation combined with patient service in order to provide the answers to these problems, illustrated in the following report.

Case Report

This 8-year-old girl was admitted to the University of Nebraska Hospitals on January 3, 1970. She had a 2½ year history of the nephrotic syndrome that had not responded to prednisone or cyclophosphamide. Biopsy 20 months after the onset showed the end stage kidney of proliferative glomerulonephritis. In the six months prior to admission, the patient's course had been marked by progressive hypertension, anemia, acidosis, and hyperphosphatemia along with symptoms of fatigue, headache, nose bleeds and purpura.

Physical examination at the time of admission revealed a pale, chronically ill girl. She was 110 cm tall and weighed 20.5 kg, there having been no increase in height since the onset of the illness. Blood pressure was 160/110. She was edematous, had old striae, and had purpura over her extremities. Diagnostic studies included bone age, which was retarded to age 7; hemoglobin of 5.0 gm%; blood urea nitrogen, 214 mgs%; uric acid, 17.8 mgs%; and creatinine, 17.2 mg%. Creatinine clearance was less than 1 ml per minute. Osteomalacia was generalized, but not advanced. Peripheral nerve transmission was within normal limits.

A Scribner shunt, with #17 gauge vessel tips was inserted in her left forearm between the radial artery and a cutaneous vein. On the night of her sixth hospital day, the patient became markedly obtunded, and developed a pericardial friction rub and acute cardiac failure. Hemodialysis was initiated on the morning of the seventh hospital day with the patient in a moribund state. Four hours of hemodialysis on a 0.6M^2 coil improved her sensorium without producing the disequilibrium syndrome. Her laboratory studies are summarized in Figures 1 and 2. The patient was dialyzed 3 times in the next four days. Gradually, over the next few weeks, her dialysis time was prolonged to 6 and 7 hours, twice weekly. All signs of pericarditis cleared 14 days after the onset of dialysis.

Protein, fluid, and salt intake were liberalized. During the early days of her dialysis, weight continued to rise (Figure 1), as did her systolic blood pressure. On her 28th hospital day, the patient had a series of grand mal seizures secondary to hypertensive encephalopathy. At that time, free fluid was again restricted to 250 ml/day and sodium chloride to 500 mg/day. More vigorous ultrafiltration was carried out. As shown in Figure 1, the weight dropped 4 kg in one week. The need for antihypertensive drugs paralleled the intake of salt and fluids.

Electroencephalographic monitoring before, during and after a 7-hour dialysis showed progressive correction of the generalized slowing that is typical of uremia. A right posterior parietal focus was identified, and thought possibly related to a prior cerebrovascular accident sustained while on steroid therapy.

Serial evaluations of affect and mentation were carried out during the first three months of dialysis. The Bender-Gestalt showed a definite deterioration, but the Porteous maze scores showed some slight improvements in performance suggesting an increasing capacity to sustain attention. An overall limitation of capacity was attributed to the severe academic and social restrictions imposed by her disease.

Once the patient and the mother became accustomed to dialysis, we were able to dialyze her on an outpatient basis. She now lives at home, is as active as in the early stages of her uremia, and

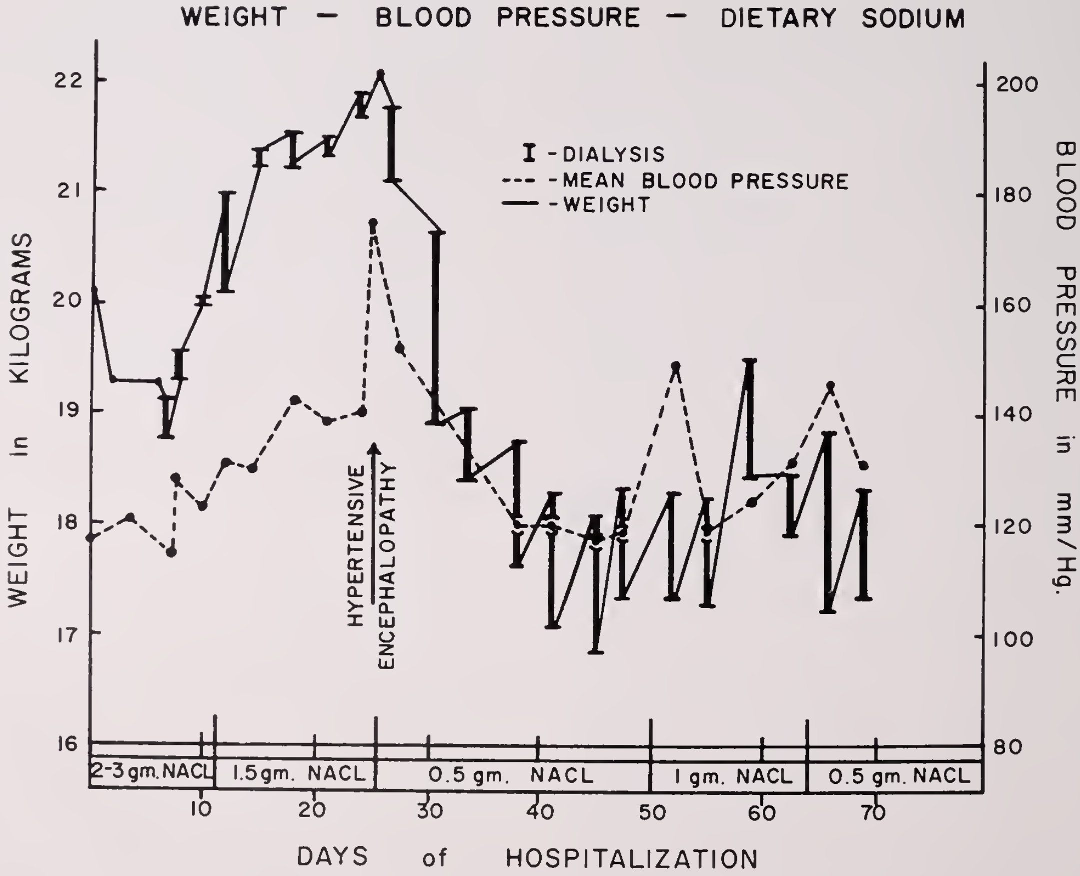

Figure 1. Correlation of weight, blood pressure and dietary sodium over the first 70 days of dialysis. Sodium restriction and vigorous ultrafiltration permitted adequate control without antihypertensives.

commutes a hundred miles twice a week for dialysis.

Discussion

The course of this patient points out some of the problems unique to pediatric dialysis. Shunt care has been handled successfully by the mother who has been thoroughly trained in shunt examination, care and declotting. The patient herself is conscious of the shunt and protects it. The small vessel tip has been adequate to provide prolonged dialysis at flows up to 145 ml/minute without problems.

Body fluid shifts have been successfully controlled. The early replacement of the ultrafiltration losses resulted in fluid retention, edema and hypertension. Ultrafiltration must be adequate to correct hypervolemia, but not so rapid that abdominal cramps, hypotension and intravascular dehydration are induced. Chronic hemodialysis is associated with a marked decrease in urine volume and severe fluid restrictions became necessary to avoid excessive weight gain between dialyses.

The uremic child despite chronic, severe anemia, may tolerate the insults of changes in volume and hematocrit better than expected. Losses of 150 ml of blood in ruptured coils have not required replacement. The sudden expansions or contraction of between 200-300 ml at the beginning and end of dialysis represent shifts of 20% of her blood volume, but are associated with only mild symptomatology.

The effectiveness of dialysis is indicated in Figures 1 and 2. The postdialysis values for BUN, creatinine and uric acid are better than those usually achieved in adults and other pediatric series.[3]

The progress the patient has made exemplifies the feasibility of treating chronic renal insufficiency in children. We have been able not only to prolong life, but to im-

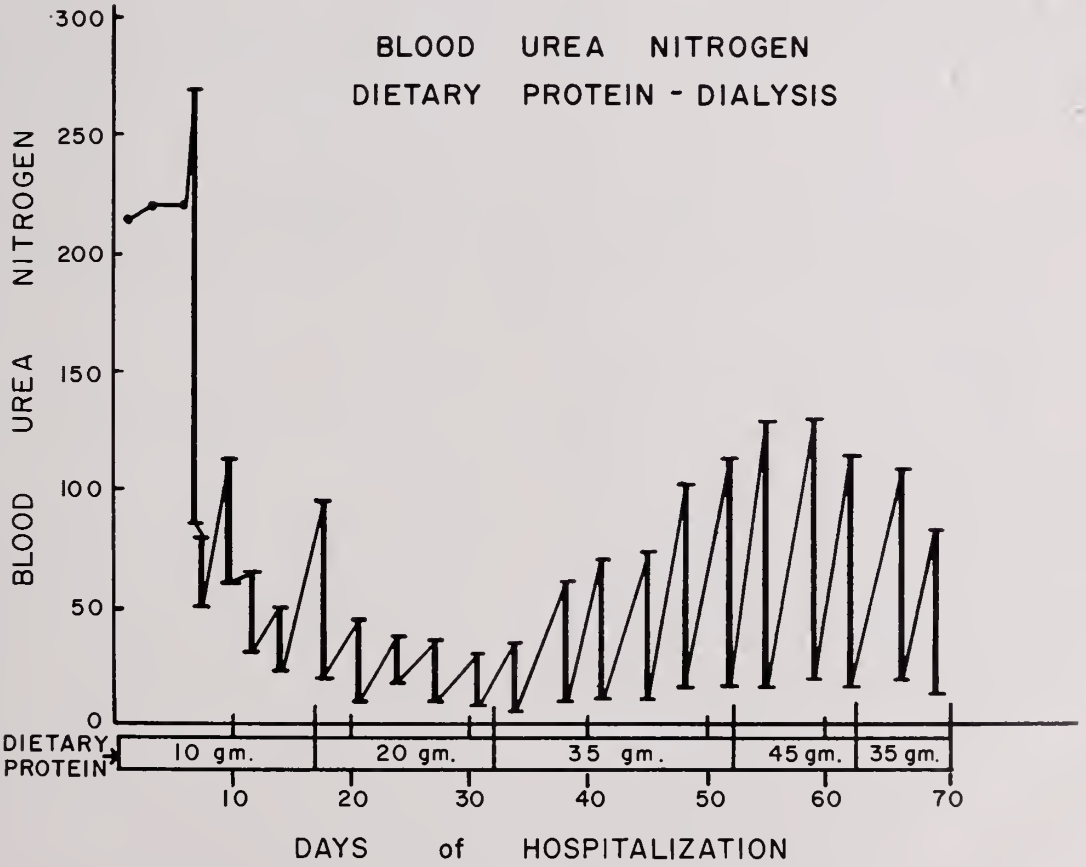

Figure 2. Correlation of blood urea nitrogen, dietary protein and dialysis. BUN is readily dialyzable as is indicated by uniformly low postdialysis figures. Predialysis BUN is directly related to the amount of protein in the diet. (Curves for uric acid and creatinine are similar to that of BUN).

prove the quality of life by allowing the return to near normal activity. Since children can be maintained on dialysis, it is now possible to investigate growth and development, metabolic changes and psychological adjustment in relationship to uremia and long term dialysis. The ability to dialyze infants and children also allows us to prepare them for renal transplantation and to treat acute renal failure or drug poisoning more effectively.

Summary

There are 15 to 20 deaths each year in children in Nebraska as a result of chronic renal disease. In an attempt to help this group of patients, we have explored, both clinically and in the experimental laboratory, the problems of hemodialysis in infants and children. We have shown that dialysis is feasible and prolongation and improvement of life as well as investigational opportunities are now possible in children with end stage renal disease.

Long term hemodialysis is not an end in itself, but allows maintenance of the child until a satisfactory match for kidney transplantation can be obtained and makes possible repeated transplants in the event of transplant rejection or recurrence of primary disease. Our program of renal transplantation in children will provide both the opportunity for service and clinical research. It may, as well, provide some initial answers to the problems of terminal renal disease in children.

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Do We Know Enough About Drug Packaging Hazards?

GEORGE M. SCATTERGOOD
Lancaster, Pennsylvania

EDUCATORS in medical colleges and even colleges of pharmacy will readily admit their present curricula is limited or utterly lacking in the areas of the protective packaging needs of modern drug products.

Most physicians naturally take it for granted that the products they prescribe will be packaged by the pharmacist so as to maintain the full therapeutic value of the product until it is consumed by their patient. But busy pharmacists like busy physicians scarcely have time to read the required literature on subjects like this.

John Autian, Ph.D., Director of Materials Science Toxicology Laboratory, University of Tennessee Medical Units has observed:

> "There appears to be, in fact, a form of prior assumption that if a packaging system is commercially available the system will be quite acceptable for a drug. The pharmacist and in particular the hospital pharmacist who has been trained to perhaps the highest degree in the quality of drugs at times stops his thinking on quality when it comes to the packaging system he will use for his drugs in his pharmacy."[1]

This quotation was directly related to the variables of plastic materials which may be indiscriminately used for drug packaging. Such plastics are readily available and, at the pharmacy dispensing level, relatively low in cost. No available stock plastic vial commonly used for dispensing solids is officially a tight container. Without regard for the type of closure, air and moisture vapor are transmitted through the styrene walls of such vials.

Of natural concern to the physician are the hidden qualities of drug products which cannot be judged until they have been ingested by the patient . . . and then only if in a given period of time they relieve or fail to relieve the condition for which the prescription was intended.

Few records are available covering those patients who have failed to respond to treatment because the medication was lacking in the full therapeutic value it was supposed to contain. Such values as were attested to by the literature of the pharmaceutical manufacturer may be fleeting if, when dispensed, the protective packaging afforded by the manufacturer is not equaled by the one who delivers the medication to the patient.

Even physicians who occasionally dispense medication for temporary relief of their patient in a paper envelope may overlook the fact that many drugs contain volatile ingredients that can quickly evaporate or otherwise lose therapeutic properties if not packaged in an air tight and moisture proof container.

One product possessing the most fleeting therapeutic value is nitroglycerin. Sublingual tablets of nitroglycerin are so volatile that, if they are not stored in a tight container, the medication factor will literally evaporate. A careful pharmacist when dispensing a quantity of nitroglycerin tablets from a stock container will transfer the remaining shelf stock to a smaller container, because even the head space left in the original container may contain enough air to reduce the potency of the remaining tablets.

Nitroglycerin is so very low in cost that many pharmacists who receive prescriptions for 18 or 24 tablets will dispense an original package of 100 at the same price as the smaller quantity because the cost to the pharmacy would actually be less than the cost of the prescription container, the counting, and dispensing time would total. So then in such instances the responsibility for storage of the excess quantity becomes the responsibility of the patient. There are a few such patients who know about product degradation hazards.

The only readily available containers for safe storage of nitroglycerin tablets are small capacity glass containers with tight polypropylene snap caps or well lined threaded closures. No available box, envelope, or plastic vial is officially "tight" because the container walls are permeable. Even unit dose foil or plastic packages have recently been found unfit for the packaging of nitroglycerin.[2]

Whereas nitroglycerin is used as a prime example, this is not the only drug that requires attention to packaging and storage. Of the top 200 most frequently dispensed drugs in 1969, 52% require protection from light and 77% require tight packages for protection against air or moisture. These figures were compiled from the official compendia USP and NF and for newer products from the labels and literature of the manufacturer.[3]

The avoidance of environmental degradation hazards is obviously more important for life sustaining, pain relieving, and tranquilizing drugs than for other products. Both the physician and the patient rely upon the medicinal values assumed to be present, so it is catastrophic when these values are found wanting.

Some pharmacists have actually considered that fully protective packaging of dispensed prescriptions was not their responsibility for several reasons. First, the official compendia USP XVII and NF XII exempted pharmacists from responsibility for light resistant containers. (This exception is being eliminated in USP XVIII and NF XIII). The exception on this one protective packaging category caused many pharmacists to assume a similar exception was applicable to other forms of protective packaging. Secondly there are few pharmacists that engage in interstate commerce, so it has been erroneously assumed that FDA regulations were not applicable to individual pharmacists. However, Section 302K of the Food, Drug and Cosmetic Act clearly states — "or if repackaged after receipt in interstate commerce." And finally the pharmacist opinion was the prescription was for a limited period of therapy so protective packaging was not important since degradation would not be likely to occur in a few days or weeks.

This latter judgment for omission of adequately protective packaging may conflict with the increasing practice of physicians to prescribe up to even six months of therapeutic dosage for patients requiring sustaining medication for long periods of time if not for life. This may be applicable both for those who can afford the larger prescription cost as well as welfare patients for which the third party total payment would be reduced by the reduction of multiple prescription fees.

To remind physicians of some of the degradation hazards affecting critical drug products, the following review may invite an awareness of these protective packaging needs:

> Photolysis or photochemical degradation of products which are sensitive to light. Both sunlight and artificial light produce energy. This energy affects chemical structures. For some common products like Vitamins C, B_{12} and Chlorpromazine HCl, light is utterly destructive. Light causes the simple product Paregoric to develop a precipitate which may be lethal.
>
> Hydrolysis is degradation through exposure to moisture. Many modern products are either hygroscopic or deliquescent. Moisture vapor is not alone related to geographical locations. The steam in a bathroom in any location can cause product deterioration.
>
> Oxidation hazards exist universally and many solid products are adversely affected and lose therapeutic properties through packaging which is not air tight. Liquids may evaporate and the portion lost is usually the vehicle. This loss results in some products dangerously acquiring higher potency per dose than was intended.
>
> Thermolysis or disassociation by heat may result in degradation of products adversely affected by normal room temperatures. Safe temperature ranges for such products are being clarified in the new USP XVIII and NF XIII.

No one could possibly expect a physician to monitor the dispensing practices of the pharmacist who dispenses the prescriptions he has written. But, a physician's awareness of degradation hazards for such a large percentage of important pharmaceutical products may influence physicians to suggest that the patient patronize a pharmacy where they know an awareness of these protective packaging needs exists.

Some physicians are members of the Pharmacy and Therapeutic Committees of hospitals where they can exercise influence over adequately protected packaging of prescriptions which are dispensed in both in-patient and out-patient categories.

Since the announcement of the important changes in the texts of the official compendia being published in 1970, which directly affect pharmacists' responsibilities, some pharmacy owners and numerous hospitals have elected to use total protective packaging for all prescriptions whether they need it or not. This means all amber glass containers with continuous thread finishes fitted with well lined continuous thread closures.

The added expense of total protective packaging is fractional and, as United States Public Health Service found as early as 1950, total protective packaging not only saved space and investment in duplicate inventory, but also saved the time of high priced personnel in reference to indices or other sources to determine safe packaging needs for individual products.[4]

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Nixon and the Congress

PRESIDENT'S PAGE

The Nixon Administration has asked Congress to assemble proposals for prompt priority in the health field. The President in his address January 22, 1971, as part of his fourth great goal provides for — "Incentives to improve the delivery of health services, to get more medical care resources into those areas that have not been adequately served, to make greater use of medcial assistants and to slow the alarming rise in costs of medical care." Mr. Nixon continued, "America has long been the wealthiest nation in the world. Now it is time we become the healthiest nation in the world."

It is somewhat difficult to accept the President's reason for veto of The Family Practice Act. He called the family medicine bill a "piecemeal" bill that "simply continues the traditional approach of adding more programs to the almost unmanageable current structure of Federal Government health efforts." He said the Federal Government "already has at least four programs on the books that provide funds which can be used to promote the training of family medicine practitioners." This may be true, but the nation is still short of physicians. The present estimate of only one family doctor for every 3,000 persons in the United States is not going to fulfill his fourth great goal on "Health Care."

The Ninety-second Congress in this session will be studying major provisions of the following health-care bills:

(1) Administration Plan — family health insurance for the poor and near-poor, replacing Medicaid and providing preventive, hospital and surgical care with full federal financing and nationwide eligibility standards and Catastrophic insurance covering all persons.

(2) Ameriplan — proposed by the American Hospital Association, would create 400 HMO-like health care corporations nationally, each to deliver comprehensive health care in a given area. Medicaid and Medicare would be eliminated. The government would buy the standard benefits package for the poor and aged.

(3) Health Care — as proposed by the Health Insurance Association of America, whose 308 companies write eighty per cent of U.S. private health insurance.

(4) "Human Security" — the national health-insurance proposal co-authored by Senator Edward Kennedy and Rep. Martha Griffiths. It emphasizes group practice and comprehensive care and eliminates Medicare, Medicaid, and private coverage.

(5) Catastrophic Illness — by Senator Russell Long, Louisiana. It protects 95 per cent of all Americans — under 65 who are covered by Social Security — against catastrophic illness.

(6) Medicredit — the AMA's plan lets individuals choose their own health coverage by giving them tax credits to buy insurance. Credits are scaled to income, with the federal government buying insurance for families paying less than $300 federal income tax per year.

(7) Minimum Health Benefits — a blend of HMO and area health-education centers as recommended by the Carnegie Commission on Medical Education.

(8) Optional Extended Medicare — prepared by Senator Jacob Javits, New York. This bill extends Medicare benefits to all Americans under 65 who chose it. It emphasizes comprehensive care through prepaid groups, NMO-type plans and private insurance plans. The government pays premiums for the poor.

There has long been an impression that physicians, like clergymen, should divest themselves from politics and that there is no need of their advice in legislation. The profession itself may have the notion that politics is a dirty business and unworthy of the attention of professional men. This may be true, but by decent men keeping clear, the condition will never improve by keeping up the prejudice. There is no class of men better qualified to purify politics than honorable physicians, who preserve the high ethical standards of their profession. If PRO and PSRO are needed for the delivery of health care, government certainly shouldn't be immune.

On March 13th and 14th, the AMA-PAC Annual Workshop will be held in Washington, D.C. Try to attend, meet your Congressman, and see what he is or is not doing for you as your representative.

Clarence R. Brott, M.D.,
President, Nebraska State
Medical Association.

WashingtoNotes

1. The President

President Nixon promised that every effort will be made to keep bureaucracy at a minimum in connection with his new overall national health program even before he disclosed its details.

". . . We do not want the doctors and those in the medical profession to be smothered under a whole, huge bureaucracy and under a great pile of government forms," he said in a speech at the 20th annual meeting of the American College of Cardiology prior to his acceptance of the college's 1971 Humanitarian Award.

"So we want your advice, we want your cooperation, we want to work together with you in developing a program that will do what is needed to be done and do the best for our patients, your patients, but also that will enable you to meet your responsibilities as unhampered as is possible by federal bureaucracy, red tape and the like," he said.

In the state of the union message, the president said:

"As a fourth great goal, I will offer a far-reaching set of proposals for improving America's health care and making it available more fairly to more people.

"I will propose:

"A program to insure that no American family will be prevented from obtaining basic medical care by inability to pay.

"I will propose a major increase in and redirection of aid to medical schools, to greatly increase the number of doctors and other health personnel.

"Incentives to improve the delivery of health services, to get more medical care resources into those areas that have not been adequately served, to make greater use of medical assistants and to slow the alarming rise in the costs of medical care.

"I will also ask for an appropriation of an extra $100-million to launch an intensive campaign to find a cure for cancer, and I will ask later for whatever additional funds can effectively be used.

"It will include a new health insurance program for all low-income families with children."

2. Medicaid, peer review, HMO

The Nixon Administration asked Congress for tighter government control over any peer review setup for medicare and medicaid than would be provided by the so-called Bennett amendment approved by the Senate last year.

HEW Secretary Richardson again asked for authority to use health maintenance organizations (HMO's) or prepaid group practice, for the government programs. He also renewed a request for authority to limit physicians' fees and other provider costs under medicare.

Concerning the proposed limitation on increases in physicians' fees, Richardson said:

"Another major change relating to medicare reimbursement that is recommended by the Administration is one which would limit medicare's recognition of prevailing charge increases to rates that economic data indicate would be fair to all concerned. We believe that if recognition of fee increases is tied to appropriate economic indexes, this will help to assure that the recognition of such increases is appropriately related to developments in other pertinent sectors of the economy."

The American Nursing Home Association already has withdrawn official support of the medicare program for extended care and has urged its more than 7,000 nursing home members to re-assess their participation.

3. VD

A National Commission on VD (Venereal Disease) has been formed to alert the public to the dangers of gonorrhea and syphilis which now afflict an estimated more than 2 million Americans.

Dr. Roger O. Egeberg, HEW assistant secretary for Health and Scientific Affairs, designated the Center for Disease Control, Atlanta, to provide staff support for the commission.

Estimating about 2 million cases of gonorrhea and 75,000 cases of infectious syphilis in the United States last year, the ASHA, which has waged continuing campaigns against the diseases since World War I, said VD had reached pandemic proportions for the third time.

Down Memory Lane

1. In case of cerebrospinal meningitis, two cultures must be taken five days apart and prove negative before a public funeral may be held.

2. Pain developing in a neoplasm which has been quiescent for a long period of time is strongly suggestive of malignant change and an indication for exploration.

3. We have through tradition carried down a misnomer, "Doctor of Medicine," meaning to the average layman, a pill peddler, or a species of nurse.

4. That the external perineum has little to do with the support of the rectum and posterior vaginal wall is shown by the fact that complete tears are not necessarily accompanied by rectocele.

5. A bill has again been introduced in the Legislature, which if it becomes a law, will require both parties contemplating marriage to submit to an examination, and obtain a certificate of freedom from venereal disease before a license will be granted.

6. The result is that today there are thousands of ex-soldiers wandering aimlessly over the country in need of hospital care.

7. May we not hope that the leading spirits of the nursing world will come down from the clouds and provide a course of training that will meet the actual needs of the people?

8. We are far enough past our war adjustment period for the effect of it to be over.

9. The Chiropractic Bill before the legislature has been killed.

10. Of late years, however, the air-borne theory as a mode of conveyance of infection has been discarded even more remotely than the fomites theory.

Nebraska State Medical Journal
March, 1921

The Letter Box

To the Editor:

In your last issue there was a review of an article about breast cancer entitled "Surgical Treatment of Breast Cancer: Trends and Factors Affecting Survival." In the article the 5 year survivals for breast cancer patients were 86% for those without axillary nodes and 50% for those with axillary nodes. The statement was made that "Postoperative irradiation did not influence survival, irrespective of axillary nodal involvement." I would like to add quickly that this is true only for the type and quality of the post-operative irradiation delivered. Fred George, reporting a more aggressive type of post-operative irradiation at the 1969 RSNA meeting, using higher energy and higher dosages with treatment of the chest wall, reported a 5 year survival of 76% in patients with axillary nodes, whereas his own series with deep x-ray treatment was only 74%. Robert Edland, reporting in Radiology 93:905 - 913, October, 1969, showed a 74% 5 year survival in the same group of patients treated with supervoltage irradiation whereas their x-ray treated patients had a 47% survival.

It is worthwhile to note that for many years the post-operative irradiation of breast cancer has been inadequate in many institutions. The continual references to this inadequate radiotherapy does a disservice to the patients having breast cancer today, in whom there is a real need and a place for post-operative irradiation. Breast cancer cannot be expected to respond to dosage levels of 3,000 R and any technique that does not permit dosages in excess of 4,500 R to internal mammary, supraclavicular, axillary and chest wall areas should be abandoned.

The current indications for post-operative radiotherapy are the same as they were 15 years ago: axillary node involvement and central or medial primary cancerous involvement in patients in whom radical mastectomy is indicated. A minimal tumor dosage of 4,500 rad to 5,000 rad is required for all areas of possible involvement, including the chest wall.

Sincerely,
Paul M. Meadows, M.D.
Director of Radiation Therapy
Uni. of Nebr. Medical Center

The above letter was referred to Dr. Payne, who offers the following reply:

To the Editor:

Many thanks for your letter of January 6, 1971, regarding our review of surgical treatment of breast cancer at the Mayo Clinic. I appreciate your interest and courtesy in giving me an opportunity to participate in the discussion evoked by the publication of the abstract in your Journal.

I would have the following comments to make in reply to Dr. Paul M. Meadows' letter to you dated November 6, 1970.

Doctor Meadows has quite accurately identified our report as retrospective in nature and therefore must be interpreted as representative of the results obtained in a specific historical era.

Radiotherapists have had a poor "track record" in the field of prophylactic irradiation for breast cancer. Let us hope that such treatment can be justified in the future as we accumulate survival data on patients treated according to more current standards.

Certainly, the 42 patients with Stage II disease treated by supervoltage irradiation reported by Edland and the similar small group reported by George warrant some optimism.

Nonetheless, it is apparent that prophylactic irradiation in the context of this discussion is on trial and is not at this time a modality of proven value in terms of patient survival.

Sincerely,
W. Spencer Payne, M.D.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—
March 20 — Elks Lodge, Broken Bow
March 27 — St. Catherine's Hospital, McCook
April 3 — Central High School, Alliance
April 17 — Elementary Grade School, Ainsworth

RURAL HEALTH — 24th National Conference; Atlanta Marriott Motor Hotel, Atlanta, Georgia; March 25-26, 1971; sponsored by the AMA Council on Rural Health.

MIDWEST CANCER CONFERENCE — 23rd annual, presented by the Kansas Division of the American Cancer Society; Broadview Hotel; Wichita, Kansas; March 26-27, 1971. All physicians in the midwest are invited, free registration, AAGP credit. Write to: American Cancer Society, Kansas Division, 824 Tyler Street, Topeka, Kansas 66612.

NEBRASKA SOCIETY OF RADIOLOGIC TECHNOLOGISTS — 1971 Annual Convention; April 16 and 17, 1971; Villager Motel, Lincoln, Nebraska. Write to: Mrs. Nancy Savery, R.T., Orthopedic and Fractrue Clinic, 2300 So. 13th St., Lincoln.

SOUTHWESTERN SURGICAL CONGRESS, 23rd Annual Meeting — April 19-22, 1971; Caesar's Palace Hotel, Las Vegas, Nevada. Write to: Jack A. Barney. M.D., Secretary-Treasurer, Southwestern Surgical Congress, 301 Pasteur Building, Oklahoma City, Oklahoma 73103.

NEBRASKA STATE MEDICAL ASSOCIATION — 103rd Annual Session, April 25-28, 1971, Omaha Hilton Hotel, Omaha, Nebraska.

NATIONAL ASSOCIATION OF UNDERWATER INSTRUCTORS — May 1-8, 1971; Underwater Explorers Club, Freeport, Grand Bahama; prerequisite: practicing physician. Write to: NAUI Hgtrs, 22809 Barton Road, Grand Terrace (Colton), Ca. 92324. Phone (714) 783-1862.

THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS — The Nineteenth Annual Clinical Meeting of The American College of Obstetricians and Gynecologists will be held in San Francisco, May 3-6, 1971. Contact: Donald F. Richardson, 79 West Monroe Street, Chicago, Illinois 60603.

NEBRASKA ASS'N OF MEDICAL ASSISTANTS — Fifth annual convention and educational seminar; May 14, 15 and 16, 1971; Villager Motel, Lincoln.

AMERICAN MEDICAL ASSOCIATION — Annual Convention, Atlantic City, New Jersey, June 20-24, 1971.

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting, House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28-December 1, 1971.

Our Medical Schools

Grant for leukemia study

A grant of $74,794 from the John A. Hartford Foundation, Inc., of New York City has been awarded to the University of Nebraska Medical Center for a study designed to predict the effectiveness of asparaginase in the treatment of patients with acute lymphocytic leukemia.

The project will be under the direction of Dr. Wayne L. Ryan, a research professor of obstetrics and gynecology.

Asparaginase is an enzyme which destroys asparagine, an amino acid found in all tissue. Previous experiments have shown that asparagine decreases both in a tumor and in other bodily organs when asparaginase is injected.

Dr. Thomas elected

Dr. Robert J. Thomas, Assistant Professor of Anatomy at the Creighton University School of Medicine was elected President of the Creighton chapter of Sigma Xi, national honorary scientific fraternity.

At a recent meeting, the 50 member organization elected Dr. Larry Holcomb, Associate Professor of Biology, to a second term as Vice President. Rev. Gerald T. Regan, S.J., Instructor in Biology, was chosen Secretary and Dr. Douglas O. deShazer, Associate Professor of Oral Biology, was elected Treasurer.

Dr. Kenny appointed at Loyola

Dr. James M. Kenny, a 1963 graduate of the Creighton University School of Medicine, has been named chief of the Pulmonary Function Laboratory and assistant professor of medicine at the Stritch School of Medicine at Loyola University of Chicago.

Continuing education

Recent advances in biochemistry of disease will be studied at a course March 18 and 19. Registration fee of $50 covers two luncheons. The course offers twelve hours of credit in category I of the American Academy of General Practice.

The course on March 25 and 26 will concentrate on obstetrics and gynecology. The fee of $50 includes two luncheons. The course carries twelve hours of credit in category I of the AAGP.

The Seventh Annual Course on cardiac resuscitation will be held on March 29-31.

For the handicapped: a phone

A telephone designed for easy use by handicapped persons is being tested at the University of Nebraska Medical Center.

The new unit is not encompassed by a booth, practically inaccessible to wheelchairs. It consists of a wall panel and shelf, which stand only 41 inches high.

The "boothless" phone is good not only for patients in wheelchairs but for those who, for lack of muscle strength or control, have limited use of their arms or fingers.

Family practice

The University of Nebraska Medical Center's two-week course designed to prepare physicians for the examination for board certification in family practice was attended by 56 physicians from 16 states.

Participants in the late January course came to the Omaha campus from such distant places as Maryland, North Carolina and Montana.

Does your town need a doctor?

Some Nebraska communities are seeking physicians while some physicians are seeking practice locations.

This knowledge has led the University of Nebraska College of Medicine to establish a service aimed at helping both the community and the physician in their searches, Dr. Robert Kugel, dean of the College of Medicine said recently.

Communities interested in obtaining a physician may register with the service which will be called the College of Medicine Physician Information Exchange.

A list of physicians seeking community practice locations will also be kept along with a list of all medical students who have expressed an interest in practicing medicine in Nebraska's communities.

New Nebraska library

Dr. Martin M. Cummings, Bethesda, Md., director of the National Library of Medicine, will speak in Omaha May 7, 1971 at the dedication of the University of Nebraska Medical Center's new library of medicine.

Plans are being developed for a day-long program which will include morning addresses and an afternoon convocation at which honorary degrees will be presented.

Pediatrics, hematology

The University of Nebraska Medical Center will offer two postgraduate courses in April.

Recent advances in clinical pediatrics will be the topic of the course April 15 and 16.

Registration fee of $50 includes two luncheons. The fee for other members of the health team will be $30. Twelve hours of credit in category I of the American Academy of General Practice are available.

Hematology will be studied at the course April 22 and 23. The fee for this course is $50 for physicians and $30 for other allied health personnel. The fee includes two luncheons. The course offers 12 hours of category I credit with the AAGP.

Medicinews

Blood donor stamp

Design of a postage stamp to salute blood donors and to urge increased participation in this vital program was announced recently by Postmaster General Winton M. Blount, himself a donor.

The 6-cent stamp will be issued March 12 in New York City in conjunction with the International Philatelic Exhibition.

"Giving Blood Saves Lives" is the theme of the stamp.

In announcing the stamp, Mr. Blount noted that blood donations are not keeping pace with increasing demands for this life-saving fluid. More sophisticated surgery — open heart, for example — claims heavily on supplies of blood and its by-products.

When President Nixon proclaimed January "National Blood Donor Month" he stated: "Among the noblest acts of personal generosity is the gift of one's blood for the benefit of another. It is a contribution to health and life for which there is no substitute."

Only about 3% of eligible American donors give blood, Mr. Blount said in asserting his belief that the postage stamp would focus attention on the problem of short supply. A French blood donors stamp is credited with trebling the amount of blood contributed there.

Collectors desiring first day cancellations may submit orders to Postmaster, New York, New York 10001, plainly indicating the full name and address, INCLUDING ZIP CODE, with remittance to cover the cost which is 6c each. The outside envelope to the Postmaster should be endorsed "First Day Covers 6c Blood Donor Postage Stamp." Orders must be postmarked no later than March 12, 1971.

It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precautions, and side effects.

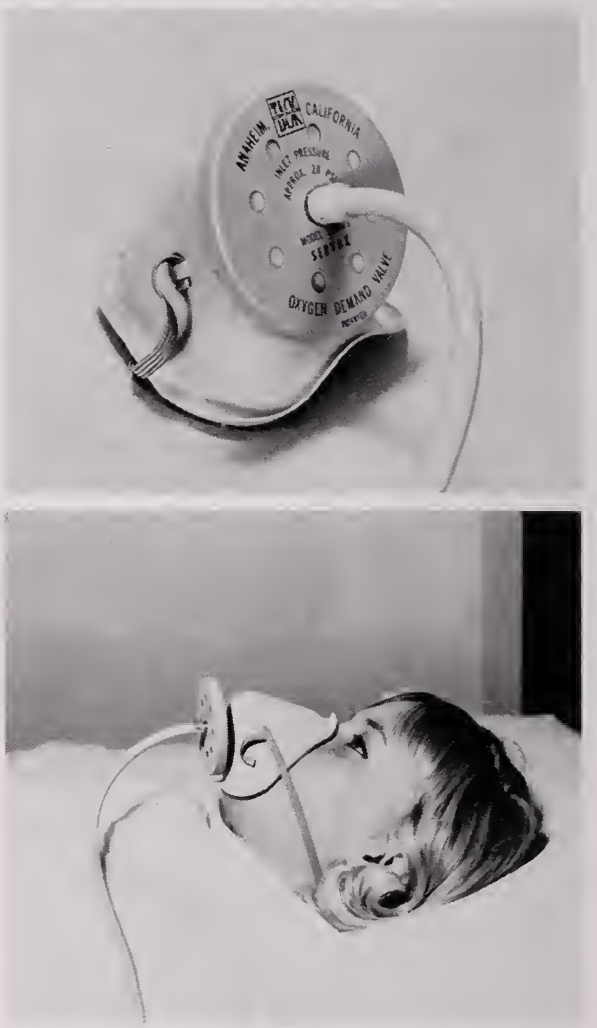
The Journal assumes no responsibility for drugs and other products listed here.

Oxygen "demand" valve

A completely new approach to oxygen "demand" valves has been announced by Task Corporation, a subsidiary of the Joy Manufacturing Company. "Demand" valves administer oxygen only on inhalation in contrast to simple constant flow systems.

Its cost is approximately one half that of currently available demand units, and for the first time, the many advantages of a demand valve — including economy in the use of oxygen — are within reach of those who could formerly afford only constant flow systems.

The new Servox® valve is one-quarter the weight of existing demand valves and is the smallest demand valve available.



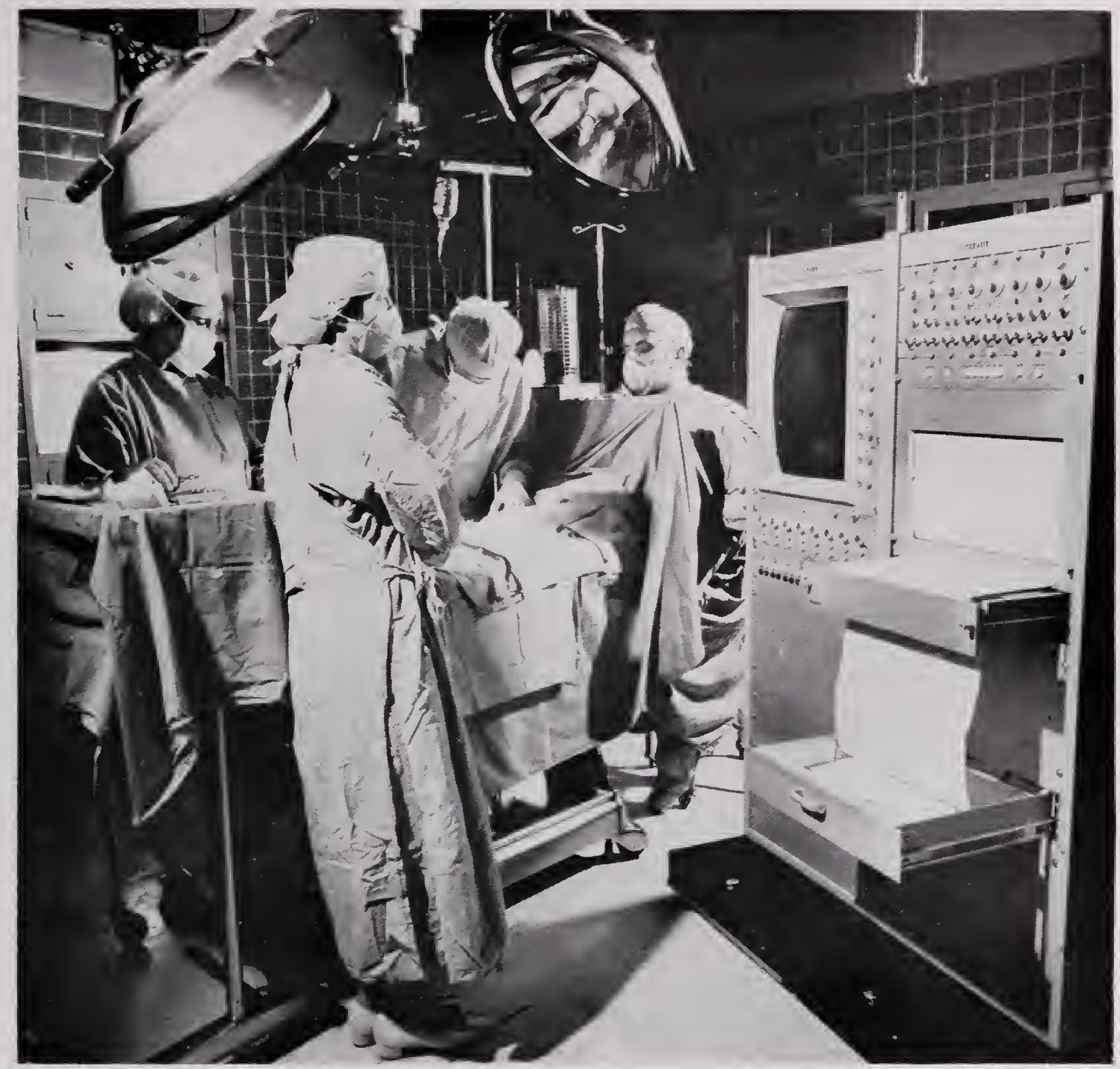
New Servox® oxygen "demand" valve developed by Task Corporation (a subsidiary of Joy Manufacturing Company) costs significantly less than currently available valves; is smaller; 75% lighter; has completely gradient flow; operates on low pressure; provides sensitory response to breathing demands. Demand valves are more economical in operation, since oxygen flows only when the user inhales.

Monitoring

Several instruments and accessories for monitoring and recording biomedical parameters will be exhibited by Brush Division, Gould Inc., at the 1971 Annual Technical Exhibit of the American College of Cardiology, Washington, D.C., February 4 thru 6.

Featured will be a rack-mounted, 8-channel Brush 480 Recorder with Signal conditioners and an 8-channel Brush Monitoring Oscilloscope. Together, these instruments provide both permanent records and highly visible instantaneous displays of up to eight biomedical parameters simultaneously on a common time base. The combination, with suitable transducers, is applicable to a variety of clinical and medical research investigations in hospitals, medical laboratories and teaching institutions.

The Brush 480 Recorder is a highly reliable, precision 8-channel recorder with twelve pushbutton-controlled chart speeds from 0.05 to 200 mm/sec. and event marking capability. Both portable and rack-mounting models are available.



Brush 480 Recorder (right) can provide permanent records of up to eight biomedical parameters simultaneously on a common time base. Above the recorder is a row of eight signal conditioners; beneath it is Z-fold chart takeup. Brush Monitoring Oscilloscope (left) provides highly visible instantaneous displays of up to eight medical parameters.

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Physicians' Classified

Advertisements in this column are at a rate of ten cents per word with a minimum of $4.00 per insertion. Copy must be received by the fifth of the month preceding date of publication and should not exceed 50 words. Advertisements from members of the Nebraska State Medical Association will be accepted without charge for one issue. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

CLINIC AVAILABLE — General practice in furnished clinic. County seat town, SW Nebraska. 3 nursing homes in town, good territory. Write Box 8, Beaver City, Nebraska.

YOUNG G.P. needs help in small Western Nebraska ranch town. Part-time, locum tenens, partnership, you name it. Low tempo general practice with office attached to good short care and long care facilities. Unlimited recreation in area. Contact: Joe Saults, M.D., Mullen Clinic, Mullen, Nebraska 69152, 308-546-2213.

GENERAL PRACTITIONER needed in young, 3 man general practice group, with surgeon. Progressive town of 6,000 with junior college and a 50 bed hospital (JCAH approved). Salary leading to partnership. New office close to hospital. Contact Doctors Graham, Dunlay and Gude, 226 Rocksylvania, Iowa Falls, Iowa, Phone 515-648-4233.

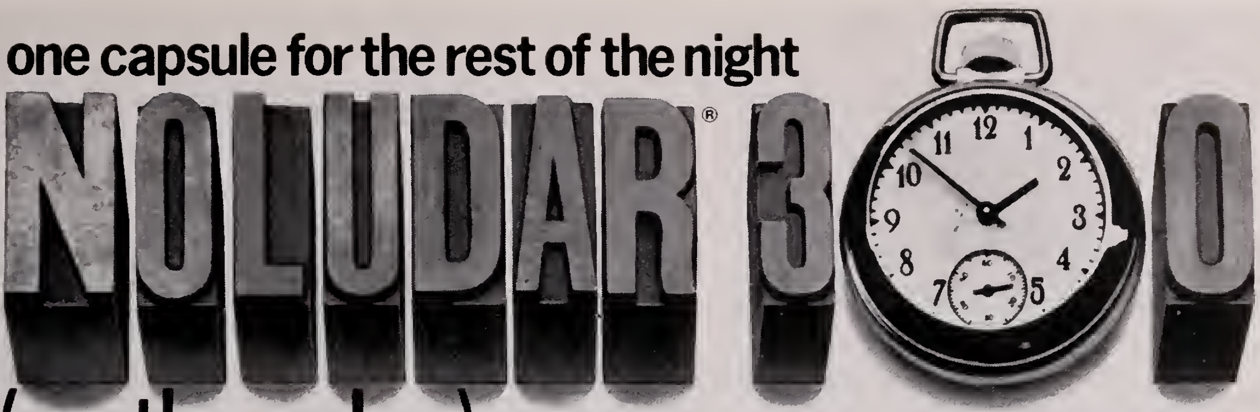
FOR SALE — Completely modernized, excellently equipped clinic. Medical and surgical location for past 35 years. Contact Box 1010, Kimball, Nebraska 69145.

RADIOLOGIST seeks position in small hospital in Nebraska. Contact Box 27, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

PHYSICIAN interested in returning to Nebraska to practice. 1959 Creighton University graduate has practiced in Illinois for 10 years and desires general practice opportunity in the state of Nebraska. Holds Nebraska license. For information contact Box 25, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

WANTED — General Practitioners in the "Heart of the Black Hills." Well established community with a population of about 2,500, service area of about 6,500. A modern 16-bed general hospital constructed for easy expansion if necessary. At present we have one General Practitioner in town. Our 78-year-old doctor passed away recently. The staff will cooperate fully as desired. The State Hospital for the Severely Mentally Retarded is located 5 miles south of town. Large medical centers are 45 minutes away. For more details contact: D. C. Kanwischer, Administrator, Custer Community Hospital, Custer, South Dakota 57730.

one capsule for the rest of the night



(methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

It's New . . .

X-ray film: daylight system

Medical x-ray film now can be cassette loaded, unloaded and processed entirely in daylight with new film handling equipment developed by Productron, Inc. of Los Angeles and the Du Pont Company.

Demonstrated recently at the annual meeting of the Radiological Society of North America, Nov. 29 to Dec. 4, 1970, Du Pont's new daylight system of automated film handling offers maximum diagnostic clarity in exposed x-ray films plus greater efficiency, and added patient capacity in hospital and clinic radiology department operations.

Du Pont also introduced its new "Cronex" chest changer at RSNA. This completely automatic machine is designed for large volume chest x-ray work and has a film handling system compatible with the company's new daylight equipment.

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Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

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Precision is a natural goal when you prescribe thyroid replacement therapy.

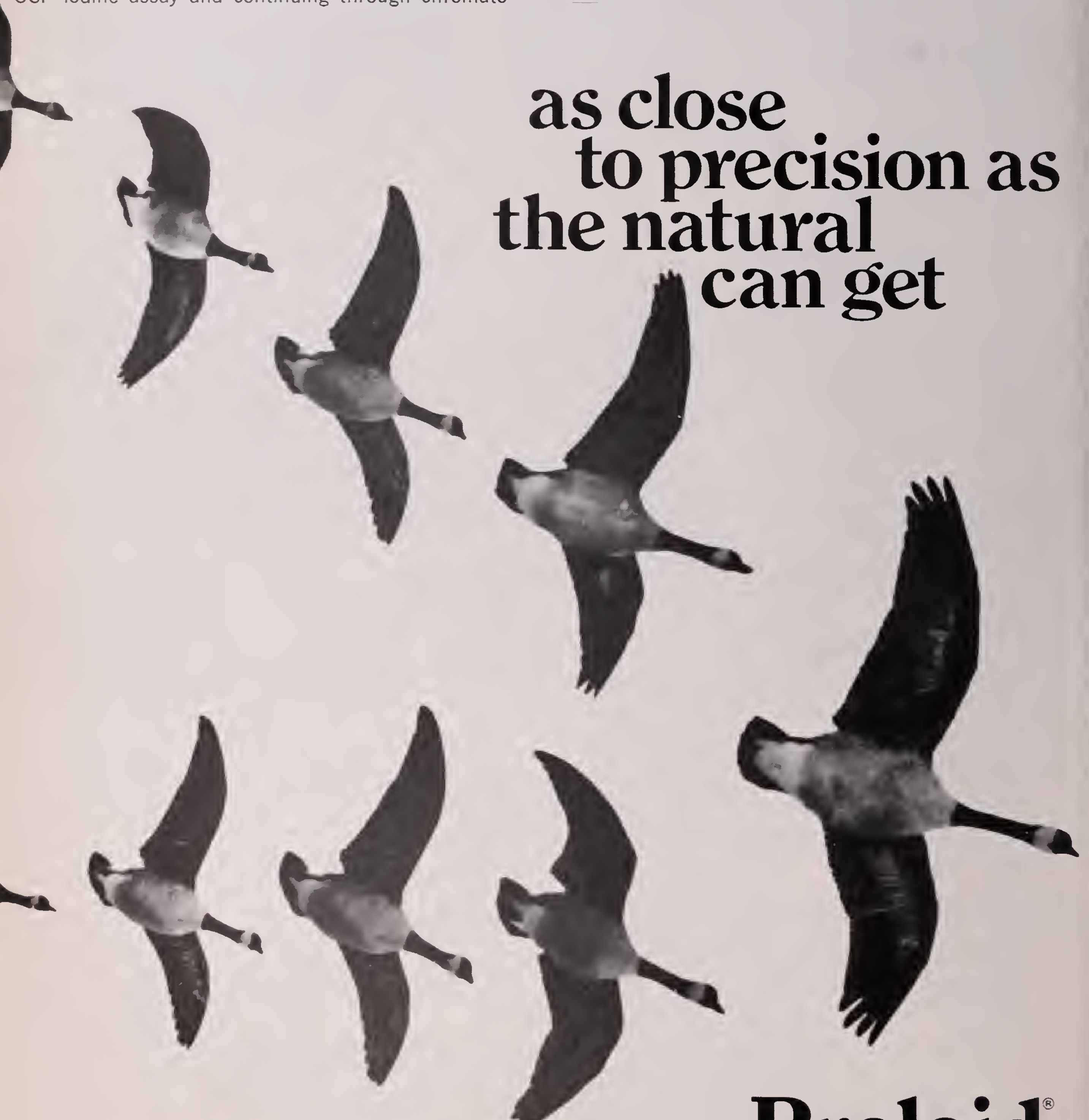
When you prescribe Proloid (thyroglobulin) you specify a precision blend of the two natural active hormones—T_4 and T_3—in their natural protein, *thyroglobulin.*

It's because Proloid is the natural thyroid hormone-globulin complex extracted and purified of unnecessary glandular debris.

91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromatographic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

New 2 grain tablet: Precision extends to dosage. With the introduction of a new 2 grain tablet, titration can be even more conveniently achieved with the full range of Proloid dosages: *¼, ½, 1, 1½, the new 2, 3, and 5 grain tablets.*

W C **Warner-Chilcott,** Morris Plains, N. J. 07950



Proloid®
(thyroglobulin)
the natural for precision

PR-GP-12-B&W

Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/ 15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/ 30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/ 45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: ¼ grain; ½ grain; scored 1 grain; 1½ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

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AUTHORIZED CONTRACT AGENT

It's New . . .

Iron, folate deficiency

Parke, Davis & Company announced the addition to its pharmaceutical product line of a new film-coated tablet designed to treat iron deficiency anemia as well as folate deficiency.

The new entry — Tabron Filmseal — represents the firm's first major film-coated tablet product, according to Joseph D. Williams, Group Vice President of Marketing and Sales.

He said that a special film-coating method applies a nonaqueous solution of water-soluble polymeric materials to the tablets without affecting the sensitive vitamins inside.

Described as the company's latest entry into the hematinic field, Tabron Filmseals contain Vitamin C; Vitamins B_1, B_2, B_6, and B_{12}; Folic Acid; Nicotinamide; Calcium pantothenate; Vitamin E; Iron; and Dioctyl sodium sulfosuccinate.

Send For It . . .

Laser film

The vast medical and surgical potential of the amazing laser light beam in such fields as cancer research, genetics, and diagnosis is explored in a new future-oriented film for the medical profession.

Entitled "Medical Potential of Lasers," the 21-minute full-color, sound film features eminent scientists, including Drs. Donald E. Rounds, Pasadena Foundation for Medical Research; Z. A. Naprstek of Cincinnati and Prague, and Nils Kaiser, Max Planck Institute, Munich.

It is available to members of the medical and allied professions on a temporary free-loan basis. Requests for prints, listing alternate dates, should be addressed to Upjohn Professional Film Library, 7000 Portage Road, Kalamazoo, Michigan 49001.

Medicinews . . .

Long-term care accreditation

Four organizations in the health field — American Association of Homes for the Aging, American Hospital Association, American Nursing Home Association, and American Medical Association — have joined in the formation of the new Accreditation Council for Long-Term Care Facilities, according to an announcement by John D. Porterfield, M.D., Director of the Joint Commission on Accreditation of Hospitals, which will administer the program.

The new Accreditation Council, successor to the Joint Commission's Long Term Care Facilities Accreditation Program, will continue the program of surveying and accrediting extended care facilities, nursing care facilities, and resident care facilities.

ORGANIZATIONS, NATIONAL

American Academy of General Practice
Mr. Mac F. Cahal, Exec. Dir.
Volker at Brookside, Kansas City, Missouri 64112

American Academy of Pediatrics
E. H. Christopherson, Secy.
1801 Hinman Ave., Evanston, Illinois 60204

American College of Legal Medicine
Miss Betty Hanna, Exec. Sec.
60 East Scott St., Suite 402, Chicago, Illinois 60610

American College of Obstetricians & Gynecologists
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79 West Monroe Street, Chicago, Illinois 60603

American College of Physicians
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4200 Pine St., Philadelphia, Pennsylvania 19104

American College of Radiology
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20 North Wacker Drive, Chicago, Illinois 60076

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American Diabetes Association
Mr. J. Richard Connelly, Exec. Dir.
18 East 48th St., New York, New York 10017

American Heart Association
James M. Hundley, M.D., Exec. Dir.
44 East 23rd St., New York, New York 10010

National Hemophilia Foundation
25 West 39th Street, New York, New York 10018

American Hospital Association
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840 North Lake Shore Dr., Chicago, Illinois 60611

American Society of Anesthesiologists
Mr. J. W. Andes, Exec. Secy.
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Hearst Building, Third at Market, San Francisco, California 94103

American Society of Clinical Pathologists
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710 South Wolcott Ave., Chicago, Illinois 60612

American Medical Association
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535 North Dearborn St., Chicago, Illinois 60610

American Urological Association
Mr. Richard J. Hannigan, Exec. Sec.
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Arthritis and Rheumatism Foundation
Floyd B. Odlum, Chairman
10 Columbus Circle, New York, New York 10019

International College of Surgeons
Aldo Parentela, M.D., Int. Exec. Sec.
1516 North Lake Shore Dr., Chicago, Illinois 60610

National Multiple Sclerosis Society
257 Park Avenue South
New York, New York 10010

Radiological Society of North America
Maurice D. Frazer, M.D., Sec.
713 East Genesee St., Syracuse, New York 13210

Vocational Rehabilitation Administration
Mary E. Switzer, Commissioner
Washington, D.C.

Medicare appointments

Elliot L. Richardson, Secretary of Health, Education, and Welfare, today named eight new members to Medicare's Advisory Council.

The 19-member Health Insurance Benefits Advisory Council is composed of doctors and lay experts in the fields of medicine and health care financing, as well as representatives of business, labor, consumer interests, and the general public. The Council reviews the operations of the Medicare program and makes recommendations for legislative and administrative changes.

The new members appointed to the Council are:

G. Robert Cotton, President and Chief Administrative Officer of the Cedar Knoll Rest Home, Inc., Grass Lake, Michigan, and chairman of the Education, and Research and Education Committees, of the American Nursing Home Association.

James R. Cowan, M.D., New Jersey State Commissioner of Health.

Oscar E. Gutierrez, D.O., Director, Davila Medical Center, San Antonio, Texas.

Edwin H. May, Jr., President of the insurance firm of May, Potter, and Murphy, Inc., Hartford, Connecticut, and former United States Representative in Congress from Connecticut.

William S. McNary, Former Executive Director of the Greater Detroit Area Hospital Council, and a President, from 1962-69, of the Michigan Blue Cross Plan.

Jay S. Reibel, M.D., Resident in Psychiatry at Mt. Sinai Hospital, New York City, and former Assistant Director (1969-70) of government Affairs of the American Medical Association.

Ernest W. Saward, M.D., Associate Dean, University of Rochester School of Medicine and Dentistry, and President of the Group Health Association of America.

Harlan Thomas, M.D., in the general practice of medicine in Tulsa, Oklahoma, and member of the American Academy of General Practice and of the House of Delegates, American Medical Association.

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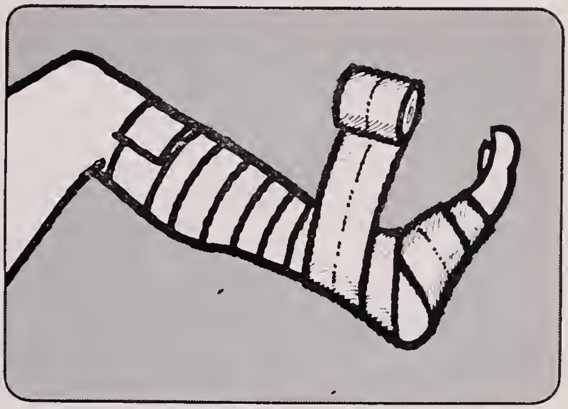

A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

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A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

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☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

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Address ....

City ....

State .... Zip ....

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NEBRASKA STATE MEDICAL ASSOCIATION
Council Districts and Component County Medical Societies

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the first synthetic to replace both active fractions of endogenous thyroid

Euthroid® (liotrix)

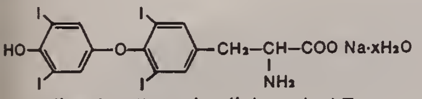
sodium levothyroxine (T_4)
sodium liothyronine (T_3)

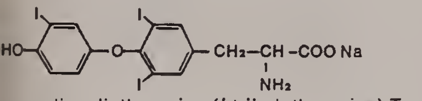
**Clark, F., and Horn, D. B.: Assessment of thyroid function by the combined use of the serum protein-bound iodine and resin uptake of ^{131}I-triiodothyronine, J. Clin. Endocrinol. 25:39 (Jan.) 1965.

Euthroid® (liotrix)

Caution: Federal law prohibits dispensing without prescription.

Euthroid is synthetic microcrystalline sodium levothyroxine (T_4) USP and synthetic microcrystalline sodium liothyronine (T_3) USP combined in a constant 4:1 ratio.


sodium levothyroxine (*l*-thyroxine) T_4


sodium liothyronine (*l*-triiodothyronine) T_3

Actions: Euthroid provides replacement therapy for the thyroactive material normally supplied by the human thyroid. The normal thyroid gland produces and stores thyroglobulin, the active components of which are two metabolically active hormones: *l*-thyroxine and liothyronine. Euthroid (liotrix) provides a combination of these hormones in purified, synthetic form, supplied in a constant 4:1 ratio in order to simulate as closely as possible the physiologic and metabolic effects of normal endogenous thyroid secretions.

In contrast with the individual synthetic, metabolically active hormones, Euthroid will usually produce normal results for PBI, T_3, and other thyroid function tests—consistent with clinical progress—when persons with endogenous thyroid deficiencies are made euthyroid. Sodium liothyronine (T_3) acts more rapidly and for a shorter period of time than preparations of biological origin. Customarily, its use as a single agent produces inappropriately decreased PBI values. Sodium levothyroxine (T_4), on the other hand, is more tightly bound by plasma protein fractions and is somewhat slower acting than sodium liothyronine (T_3); its use as a single agent tends to produce inappropriately elevated PBI values. Euthroid, with its unvarying 4:1 ratio of T_4/T_3, permits interpretation of appropriate laboratory tests consistent with the total clinical status of the patient.

Indications: Euthroid (liotrix) provides thyroid replacement therapy in all conditions of inadequate production of thyroid hormones, namely:

1) Hypothyroidism, including cretinism and myxedema.
2) Simple (nontoxic) goiter.
3) Subacute or chronic thyroiditis including Hashimoto's disease.
4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3, T_4, and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)		**Approximate Equivalents** **Natural**	**Synthetic**	
Tablet	T_4*/T_3** mcg	Thyroid USP	T_4*	T_3**
Euthroid-½ pale orange	(30/7.5)	½ grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

*T_4=sodium levothyroxine (*l*-thyroxine)
**T_3=sodium liothyronine (*l*-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: *Symptoms*—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

Supplied: Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

E-GP-11-4C

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ORGANIZATIONS, STATE

Alcoholics Anonymous
Lincoln Center Bldg., Lincoln 68508

American Red Cross
1701 "E" St., Lincoln 68508

Cerebral Palsy Association of Nebraska
Mrs. Ben H. Cosdery
201 South Elmwood Road, Omaha 68132

Creighton University School of Medicine
Joseph Holthaus, M.D., Dean
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International College of Surgeons
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7906 Dodge Street, Omaha 68114

Multiple Sclerosis Society
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National Cystic Fibrosis Research Foundation,
Nebraska Chapter
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National Foundation, Inc.
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Arthritis and Rheumatism Foundation
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Accreditation

The new *Accreditation Manual for Hospitals* is now available from the Joint Commission on Accreditation of Hospitals, according to an announcement by the Commission.

Prices for the Manual, which has been published in two editions, are: $8.00 for the loose-leaf binder edition (includes a two-year up-dating service) and $2.25 each for one to five copies of the soft-cover, bound edition, $2.00 each for more than five copies. The Commission's address is: 645 North Michigan Avenue, Chicago, Illinois 60611.

Medicinews . . .

NLN-NSNA conventions

More than 20 vitally important health and nursing issues will be the subject of task force meetings and open forums scheduled for the history-making combined conventions of the National League for Nursing and the National Student Nurses' Association in Dallas, May 9-12. The conventions will be geared toward producing a blueprint for nursing action on some of the social ills affecting the nation today.

National League for Nursing 212-582-1022; National Student Nurses Association 212-582-7230; Ten Columbus Circle, New York, New York 10019.

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thiopropazate
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propantheline bromide
with
Phenobarbital 15 mg.
warning:
may be habit forming

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in time-release form

Pro-Banthine 7½ mg.
propantheline bromide
Half Strength

Pro·Banthīne®
(propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.
Contraindications: Glaucoma, severe cardiac disease.
Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.
Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.
Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthīne® 15 mg.
(propantheline bromide)
with
Dartal® 5 mg.
(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.
Contraindications: Glaucoma, severe cardiac disease.
Warnings: Pro-Banthīne with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.
Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.
Adult Dosage: One tablet three times a day.

Pro-Banthīne® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.

Warning: May be habit-forming.
For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthīne. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthīne P.A.®
prolonged acting brand of propantheline bromide
For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthīne.
Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.
Dosage: The recommended initial dosage is one tablet in the morning and one at night.

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Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the Journal's address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.

Our Medical Schools . . .

Hermann appointed

John B. Hermann has been named Executive Assistant to the Dean of the School of Medicine at Creighton University. Previously he was assistant to the Dean for Planning.

A journalist by profession, Hermann graduated with honors from the University of Iowa in 1950 and undertook graduate studies in public relations there. While in college, he was a medical reporter for the "Daily Iowan."

From 1951 until he joined Creighton in 1967 as director of planning for the Creighton component of the Nebraska-South Dakota Regional Medical Program, Hermann held various positions with the Heart Association.

He was program coordinator for the Iowa Heart Association, executive director of the Nebraska Heart Association and later the Iowa Heart Association. He served as general consultant to the American Heart Association's Far West region and later the Great Plains region.

Hermann is a member of Phi Beta Kappa, national scholastic society; Kappa Tau Alpha, national scholastic journalism fraternity and Sigma Delta Chi, national professional journalism fraternity. He is recipient of the third Johnson Memorial Award for Newswriting and past president of the Staff Conference of Heart Association.

THE NEBRASKA STATE MEDICAL JOURNAL

THIS TOWN NEEDS A DOCTOR

Critics maintain that there are not enough doctors, that we need more general practitioners, and that there is a shortage of doctors in rural areas. The small community offers good income, hunting and fishing, and the pleasure of small-town living. The city has better hospital and consulting facilities, a different social life; and more in the way of night-clubs, theaters, and restaurants. It is often the doctor's wife who prevents him from choosing the small town. But how are you going to keep them down on the farm, or in small communities?

Motivate them. In one recent year, over half of the graduates in this state chose general practice, while the number of those in Boston who did so was zero.

Subsidize them. Pay their loans. Or count rural practice the equivalent of service in the armed forces.

Have admissions committees give preference to students who agree to go to small towns, or to stay in the state. If the government is paying the bills, one day the government will decide *who* goes *where.*

Get a matching system. One town advertised for a doctor, and it got one. The doctor who wants to live in a small town advertises in a medical journal that townspeople don't read. And when medical schools announce a meeting to get the doctor and people together, the people often do not come.

Or wait. This situation is common to all countries, and it may take care of itself by the supply and demand law that governs other enterprises, so that lawyers and dentists and barbers live where they please. If you settle in an area with only 400 people, you cannot insist that a doctor come to live there, too.

Coercion is not healthy. Telling people what they must be and where they must live is unwise, and unlawful in a free society. Subsidizing those who will practice in small towns and excusing them from military service seem the best answers to what may be a problem.

—F.C.

YOUR NEXT PATIENT MAY SUE YOU

Patients sue doctors oftener than they used to, they sue for larger amounts, and they sue because they are angry. The kindly old doctor has been replaced by a more efficient person who, the public feels, cares little if the patient lives or dies, who does not listen, and who takes too little time to find out what is wrong. Newer techniques have only made him a technician, and his increased efficiency may need to be proved. Solo practice is thought inefficient, and group practice is called an assembly line with a captive audience. Then there are the doctor's fees, newer treatments that cost more, and rising hospital costs over which the physician has no control. Meanwhile, nearly one doctor in five in the U.S. has been the subject of a malpractice claim.

Let's discard *res ipsa loquitur.* If the doctor's at fault, prove it.

We are no longer in the position of shielding the patient from every fear, and the old consent may be meaningless; informed consent is better.

The law has much to answer for. It differs from state to state. Decisions are based on technicalities and reversed on appeal. Decide by reason, with a judge; not by emotion, with a jury. Eliminate the contingent fee basis; it's not used in Canada; let the lawyer charge by time or procedure. Enforce a reasonable statute of limitations. Exclude frivolous and nuisance claims. Hold those responsible who sue when they are wrong. Consider a no-fault law, arbitration, and government liability insurance. Put a reasonable ceiling on settlements. Try pretrial screening methods.

When you're right, don't settle. Don't promise cures. Welcome and suggest consultation.

Don't call it malpractice. That's convicting you before the trial. It's like saying life insurance companies pay when you die because they killed you. Liability is the word.

Perhaps we have drifted apart. The patient, once a friend, has become a potential enemy, and insurance companies pay more than they collect. Where a whole doctor once looked at the entire person, the patient says that now a special kind of a doctor looks at a little piece of him and sees nothing. What the medical world needs, I think I am trying to say, is love. We want the kindly old doctor and we want his modern counterpart. We need both.

But we need the kindly old patient and the kindly old lawyer, too.

—F.C.

WHAT ARE THEY FOR?

If I were God, and decided to build human bodies that would not last forever, I should probably wind up with products at the end of the assembly line that look like what we have now, rejects and all. Do not automobiles resemble people, down to four extremities, two light-associated organs in the front, and an excretory device at the rear?

But there are so many things we do not appreciate. Are they left over from some developmental system, have we yet to discover their various purposes, or will they be removed in newer models?

What is the thymus for? Galen called it an organ of mystery. Of what use is the appendix? It was at one time thought to ward off cancer.

Spleens are taken out daily, and spleenless people manage to survive. Parts of the brain have been removed successfully, up to half of the whole thing. The gallbladder does things we understand, but one can live without it, as we can carry on with only one of each of our paired organs, the lung, adrenal, and kidney.

Tonsils and adenoids come out by the thousands, and we are very likely the better for it; so does the great saphenous vein. Then there are Meckel's diverticulum, the male breast, the prepuce, and pubic hair. There is menstruation, which is a thing, I suppose.

I do not know what my toenails are supposed to do, and I might possibly get along without toes.

And there's hair in the ear. If I lose scalp hair with the passing of time, why do I grow more ear hair?

—F.C.

Cooperation in Reaching Health Goals*

WALTER C. BORNEMEIER, M.D.
President
American Medical Association

IT is a pleasure for me to be with you, and to have this opportunity to share with you some of my thoughts on America's medical and health care system. It is a pleasure to visit any of the great cities of this great nation . . . as long as one remembers not to inhale.

We have gathered here to talk about health care. Yet in some locations in this nation, the environment has become so unhealthy that physical education courses are being curtailed by schools because it is too dangerous to make children exert themselves enough to breathe deeply.

Not long ago, I met a young man who told me he was born in Chicago. Being curious about his age, I asked, "When did you first see the light of day?" And he said, "When I moved to the suburbs."

The headquarters of the American Medical Association, where discussions about health go on every day, is located in that second most air-polluted city in the nation. A city that boasts the Calumet River, which is said to be the most polluted body of water on earth. It is ironic indeed that all over this country, meetings are called almost daily to decide how physicians can take better care of people. People who are breathing poisoned air and drinking water that has become so filthy that all known purification systems can barely make it clean enough for human consumption. But what about the nation's much-debated medical and health care system?

As both a physician and president of the AMA, I am forced to say that it is inadequate to meet all the needs of this nation of 200 million souls. The system needs a great deal of improvement. And it will be impoved. But I can say with assurance that it will never improve to the point that you or I or the AMA is satisfied with it. The reason is that no matter how good medical and health care gets, the level of expectations always runs ahead of it. That sounds bad, but really it's good. We who are in the health care system are permanently discontented with the medical status quo. If we hadn't been in past years, people would still be dying of smallpox, diphtheria, yellow fever, tetanus, typhus and polio, to mention just a few scourges that have virtually been eliminated from this nation. The discontent of physicians with what they are able to do assures that a person's life will be healthier and better than his parents' was . . . and that his children's will be better than his.

The biggest challenges of today, however, go far beyond finding cures for disease . . . or ways to eradicate disease. The scientific problems of medicine remain large. But they are almost overshadowed by the socio-economic ones.

Let me give you a few examples. Not long ago, the AMA identified eight of the most pressing health problems confronting our profession and the nation.

Here they are:

—First, the acute shortage of health manpower. That includes physicians and all other professionals, technicians and workers in the health care industry, which is now the nation's third largest employer and will be number one before the end of the '70's.

—Second is the rising cost of medical and health care.

—Third, the problem of financing medical and health care, including all possible sources — the patient himself, private insurance, business and labor union programs, government programs and any others that can be devised.

—Fourth is mental health, which continues to be the nation's number one health problem in terms of cost, use of hospital beds and human misery.

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*Presented at Bishop Clarkson Memorial Hospital, Omaha, Nebraska, June 26, 1970.

—Fifth is one I've already mentioned — pollution of the air, water and land of our nation.

—Sixth, alcoholism and drug addiction.

—Seventh is health care of the poor in the inner cities, as well as of persons in isolated rural areas not served by health institutions or personnel.

—And eighth is malnutrition, which most people confuse with hunger. Since it also includes poor diet and poor eating habits, it is a problem that reaches into every social level and every stratum of income.

When you look at all of those, plus others that could be listed, you must be struck by the realization that the biggest problem — the one that encompasses all the others — is that none of them can be solved by the medical profession alone. In every case, it's going to take all elements of society, working hand in hand, to develop a workable solution. That means the medical profession . . . other health care professionals . . . technicians and semi-professionals in the health area . . . hospital people . . . federal, state and local government . . .industry . . . business . . . organized labor . . . and educational institutions. I'm not going to go through all eight of those problems and point out what needs to be done. Instead, I want to concentrate on just two of them and discuss their magnitude.

One of the most obvious problems is the so-called shortage of physicians and other health personnel. I say "so-called" not to disguise the facts, but simply because the situation is a strange one. To split hairs about it, there is not a shortage of professionals. There is, instead, a fantastic growth of demand for medical and health care. We have more physicians today than ever before. Their number has grown faster than the population, so the ratio of physicians to total people is more favorable. The same is true of dentists, nurses, technicians and all others in the field. But there still aren't enough of these highly skilled people to take care of the multiplying needs and desires of the nation. More people go to a doctor more often today than they ever dreamed of just a few years ago. They go to have real problems solved.

And they also go by their own choice, for things they'd like to have done, but which are not truly necessary — such as cosmetic surgery, removal of moles, obesity control and a host of other conditions they would have ignored a generation ago. The reasons for the increased use of medical and health care are many The greater effectiveness of medical science, which can do more. More education and greater awareness by people of what can be done. More affluence among most people, making it possible for them to have whatever they want — in health care as in other areas. The growth of private insurance, solving many of the financial problems of better, more complete care. And government financing programs, making care more easily available to people who formerly could not afford to pay . . . and hesitated to seek charity care except in dire emergency. The problem of developing more physicians can only be solved slowly, no matter how much is done.

With college, medical school, internship and residency, it takes about nine to 14 years to turn out a practicing physician. A great deal is being done, much of it at the urging of the AMA. Medical schools are studying ways to shorten their curriculum without sacrificing quality. New schools are being built — 24 of them since the end of World War Two. Existing schools are expanding their enrollment. By 1975, the U.S. will be graduating 10,000 physicians a year. That won't be enough.

Nobody can say what will be enough because nobody can ever guess how much care the people of this nation will need — and will want — in the years ahead. But building or enlarging a medical school is terribly expensive. It takes action by state legislatures. It takes money from taxpayers — either through their states or their federal government. Neither the medical schools nor the medical profession can do this job alone. It has to be a project of all of society.

Another obvious problem is health care for the poor. Certainly the health of people who must live in slums is not good. And it isn't likely to get any better until a great deal is done, much of which they must do for themselves.

The question we are asked every day is, "What is the medical profession going to do about it?" The answer is, "We'll do everything we can, but it won't be nearly enough if we must work alone."

That is not a denial of our responsibilities. It is not a refusal to do what we know must be done. It is a simple statement of fact, recognizing that the problems of the poor are so complex that they cannot be solved by any one profession, or any single organization.

Instead of looking at over-all conditions, many current observers of the slums have chosen health as the primary problem. Indeed, some treat it as the only problem. They demand that the medical profession and its allies in the health field do not just something . . . but do everything, immediately, to establish good health among all of the deprived people who live in the unspeakable conditions of the slums. Expecting the medical profession, or anybody else, to single out one problem in the big-city slums of this nation, and to solve it without changing all of the conditions that contribute to it, is the same as asking somebody to build a house in the midst of a hurricane.

Many conditions in the slums contribute to poor health. And the solution to the health problems of those unfortunate people cannot be found until all other slum conditions also have been corrected. We cannot build our house until the hurricane has passed. But we want to do our part. We want to be society's partner. We want to work with all other groups, agencies, organizations and individuals to mount an attack against the total problems of the slums. The attack cannot be limited to the problem of poor health. It must simultaneously confront problems of housing, sanitation, adequate diet, education, motivation, employment and a host of others.

The attacking army cannot be limited to the medical profession and its health allies. It must combine the efforts and resources of government with those of the health field, civic groups, educational groups, religious denominations, philanthropic organizations, labor unions, employer associations, industries and all other elements of our complex society. Priorities must be established and all of our efforts must be carefully coordinated. Solving any single problem is impossible without solving all of them. Decent housing is unreachable to people who have no job. A decent job is unattainable without education. Education is difficult, if not impossible, for people whose mental alertness is dimmed by the physical weakness of inadequate diet.

The availability of medical care means little to people who lack the knowledge and the motivation to take good care of themselves and live in a healthful manner. A great deal is being done by the medical profession, working with governmental and private agencies, to make medical and health care more easily available to people in the slums. And it has been going on for many years. That brings me to a brief digression in order to make a very important point. Throughout our nation's history, physicians have taken care of the poor. They have drastically reduced their fees, or they have made no charge at all, for people who were unable to pay.

It was estimated — since exact figures are impossible — that in one year of the last decade, as much as a billion dollars in medical attention and hospital care was given away to poor people. That's the way the medical profession has acted as long as there has been a medical profession. Then the federal government passed the medicare and medicaid laws. The first paid for certain care of the elderly, regardless of their economic situation. The second provided a combination of federal, state and local payment for care given to the poor — the medically indigent.

It was the federal government — not our profession — that insisted on paying for the poor. Yet today, physicians all over the country are being accused of fraud and worse things because they are accepting government money for taking care of people under those laws. Many physicians devote all or most of their practice to the care of the poor. Under the federal laws which the government passed over the opposition of our profession, those physicians are receiving a substantial amount of federal payment. But the assumption by some is that any physician who is being paid more than a certain amount of money through the programs is automatically guilty of a dark and criminal act. It makes no sense to me at all to pass a law saying you will pay a professional for what he has been doing free . . . and then accuse him of wrongdoing because the payments are made.

I hope you will keep that thought in mind as you read the continuing string of articles appearing in the nation's press implying that physicians who treat the poor are either stealing from their patients . . . cheating the government . . . or both. I'm afraid that when I really get warmed up on this big subject of health and health care, I can go on for hours.

But it is time I stopped. I do hope I can leave one major impression with you. The medical and health care system of this nation is a good one. It has not broken down. It is not falling apart. It is not riddled with graft, nor festering with incompetence. It is made up of men and women who are proud of their skills and dedicated to using them for the betterment of their fellow man.

The system is, however, understaffed. It is crowded with patients, for whom it is doing the best possible job. It performs miracles now and then . . . in the spectacular cases that reach the newspapers. But mostly it just goes along its way, doing a yeoman job of taking care of millions of people who need help. Removing appendices. Delivering babies. Setting broken bones. Giving medicine for the flu. Binding up wounds. Curing disease. Little or none of that generates national notice.

The furor comes about — and rightly so — because there are people in our huge nation . . . in its big cities, in its mountains, in its rural areas . . . whom the system does not reach as often as it should. There are people to whom it is not as easily available as it should be. Nobody recognizes those weaknesses more clearly than physicians. And nobody is working harder to eliminate those exceptions to an over-all picture of good care for the nation. Along with many other concerned persons, we see a situation that must be changed. It is one that can be changed. But only by correcting a great many non-medical circumstances that contribute to the problem.

And those changes can only come about if all of us — here and throughout the nation — who want to see the job done work together, hand in hand, to get it done.

Dyspnea and Thyrotoxicosis

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DYSPNEA on exertion is one of the commonest symptoms of patients with thyrotoxicosis.[10, 36] Although Morgan and Williams[22] postulated in 1940 that the dyspnea ". . . was due to weakness and atrophy of the muscles of respiration," definitive studies which proved that weakness of respiratory muscles occurred in association with thyrotoxicosis were not done until the 1960's.[28, 35]

Recently my colleagues and I had the opportunity to study a young registered nurse with thyrotoxicosis who presented with dyspnea as one of her primary symptoms. Complete studies of pulmonary function and lung mechanics proved that there was weakness of the respiratory muscles. Treatment with radioactive iodine reversed the weakness.

It is important to stress that weakness of respiratory muscles may occur in cases of thyrotoxicosis and that it may prove to be a common feature if proper tests are performed to elicit it. That respiratory-muscle weakness may be a factor but not the entire explanation underlying dyspnea in thyrotoxicosis is discussed.

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Report of Case

A 22-year-old female registered nurse from the Philippine Islands was seen for the first time at the Mayo Clinic in February 1970 with a 5-week history of shortness of breath and loss of 17 lb. Previously she had enjoyed good health and had had a normal exercise tolerance. There was no past history of cardiopulmonary disease. In January 1970, after an upper respiratory infection, she developed a rapid heart rate, loss of weight, dyspnea on exertion, heat intolerance, excessive perspiration, and tremor.

On physical examination, she was 59 inches tall and weighed 87 pounds. The pulse rate was 100 beats/min, and the blood pressure measured 120/70 mm Hg. The hands were dry and warm, and there was a fine tremor. The thyroid gland was smooth, firm, and diffusely enlarged — the estimated weight being 35 gm. There was a bruit over the right lobe of the thyroid gland. Breath sounds were normal. No cardiac murmur was heard, and the heart was not enlarged. There were no eye signs. The remainder of the examination revealed normal findings.

Urinalysis, white blood count, erythrocyte count, and determinations of blood hemoglobin, erythrocyte, sedimentation rate, blood sugar, and serum creatinine gave normal results. Other laboratory values follow: basal metabolic rate +46%, serum protein-bound iodine 11.7 μg/100 ml, serum thyroxine 16.8 μg/100 ml, and serum cholesterol 91 mg/100 ml. A radioiodine thyroid tracer showed a 76% uptake in 6 hours, and a 91% uptake in 24 hours. A thoracic roentgenogram was interpreted as normal. The electrocardiogram showed a sinus tachycardia of 120 beats/min and a short PR interval. Pulmonary function studies (Table 1) and special studies of lung mechanics (Table 2) were compatible with a pattern of weakness of the respiratory muscles. The carbon monoxide diffusing capacity was normal on two occasions.

The patient was treated with 6.2 mc of radioactive iodine. At the time of the follow-up examination 6 weeks after treatment, she had gained weight and was completely asymptomatic. She weighed 95 lb. The pulse was 72 beats/min and the blood pressure was 120/80 mm Hg. The weight of the thyroid gland was estimated to be 15 gm. A repeat determination of serum thyroxine 5 weeks after treatment gave normal findings — 3.1 μg/100 ml. A radioiodine tracer showed 10% uptake in 6 hours, and 14% in 24 hours. The radioimmunologic assay for serum thyroid-stimulating hormone (TSH) gave a value of 0.9 μU/ml (normal, 0 to 10). Repeat pulmonary function studies (Tables 1 and 2) showed a return toward normal function.

Comment

Dyspnea on exertion occurs in up to 80% of cases of thyrotoxicosis.[10, 36] Although one of the commonest symptoms of thyrotoxicosis, dyspnea is a subjective sensation and has more than one mechanism of production.[5] For instance, it can be related to changes in cardiac function,[14] although we do not think this was the mechanism in our case. The changes in cardiac function observed in cases of hyperthyroidism — including tachycardia and increased cardiac output — resemble those associated with sympathetic stimulation. However, the tachycardia in association with hyperthyroidism cannot result exclusively from sympathetic stimulation, since beta blockade with propranolol hydrochloride (Inderal) does not reduce the heart rate to normal.[13] It is likely that the tachycardia is partly due to the direct effect of thyroxine on the heart, since experimentally it has been shown that thyroxine has a positive chronotropic action on the myocardium.[31] Also, there probably is increased myocardial contractility.[9]

The dyspnea of thyrotoxicosis can be related to peripheral circulatory changes which have the net effect of a large arteriovenous fistula.[10] In hyperthyroidism, blood flow in the limbs increases, arterioles in the skin dilate, cutaneous capillaries open,[29] systemic arterial resistance decreases,[10] and circulating blood volume increases.[7] There has been no definite evidence of hyperventilation in relation to oxygen uptake,[1] and the hyperventilation on exercise of patients having hyperthyroidism cannot be explained by an abnormal sensitivity to carbon dioxide.[34]

Prior to therapy, our patient was found to have several abnormalities in pulmonary function (Tables 1 and 2). The vital capacity was diminished, the residual volume was increased, and other lung volumes and capacities were within the normal range. Peabody and Wentworth[23] and others[3, 16, 24] noted a decrease in vital capacity of patients with thyrotoxicosis. Although the vital capacity does not always fall outside the normal predicted range, it invariably increases after treatment.[6, 26, 28, 35] The residual volume is usually increased,[18, 26, 28,35] and it decreases

Table 1.--Pulmonary Function Tests

	Values		
		Observed	
Function tested	Estimated normal	Day of treatment	Six weeks later
Pulmonary volumes			
Vital capacity (VC) (expiratory), liters	2.7	2.05*	2.47
Residual volume (RV), liters	1.0	1.32	1.00
Total capacity (TC), liters	3.7	3.37	3.47
RV/TC x 100, %	35	39	29
Functional residual capacity, liters	1.7	1.99	1.67
Expiratory reserve, liters	0.6	0.67	0.67
Maximal breathing capacity, liters/min	79	90	110
Maximal midexpiratory flow, liters/sec	2.4	2.9	4.0
Nitrogen washout index, % N_2	≤2.5	0.7	0.6
Arterial oxygen saturation, % (oximeter)			
Resting (breathing air)	95 to 98	93	98
Resting (breathing oxygen)	100	100	100
Before exercise (breathing air)	95 to 98	91	98
After 5 minutes of exercise (breathing air)	No fall	91	98
Ventilation (sitting, resting, breathing oxygen)			
Liters/min		10.15	8.52
Respirations/min		22.1	15.1
Average tidal volume, ml		459	564

*Decreased vital capacity is indicative of muscle weakness.

following therapy.[26,28,35] Others[26,28] have noted a decrease in inspiratory capacity. The total lung capacity and the functional residual capacity are usually normal,[18,28] although this has not been found in all cases.[26,35]

Ventilatory function usually has been found to be normal, but occasional patients have a decrease in maximal breathing capacity (MBC)[6,18,28,35] or a decrease in the peak expiratory flow rate[6] as was found in our case. The finding of a reduced peak inspiratory flow rate has not been reported before. The maximal midexpiratory flow (MMF) is normal.[18]

The dynamic and static compliances as well as the specific dynamic and static compliances were decreased in our case. McIlroy and co-workers[20] found a normal static compliance in two cases and Massey and co-workers[18] found a normal static compliance in seven of nine cases, but in two cases the

Table 2.--Special Studies of Lung Mechanics

	Values			
			Observed	
	Predicted		Day of	Six weeks
Subject	Mean	SE	treatment	later
Compliance, liters/cm H_2O				
Dynamic (quiet breathing)	.196	.06	.068	.078
Static			.078	.092
Retractive force at total capacity, cm H_2O	-38	10	-39	-39
Pulmonary resistance to flow, cm H_2O/liter/sec	2.9	.6	1.70	2.37
Maximal static expiratory pressure, cm H_2O	152	54	58†	101
Maximal static inspiratory pressure, cm H_2O	87	32	46†	63
Cough pressure, cm H_2O	150*	30*	78†	108
Slope of flow-volume plot	2.7	.8	3.72	2.87
Peak expiratory flow, liters/sec	[Range 5 to 8]		4.54	4.54
Peak inspiratory flow, liters/sec	[Range 4 to 8]		2.80	4.23
Total lung capacity ("body box"), liters	3.7	...	3.13	3.26
Total lung capacity (N_2 washout), liters	3.7	...	3.37	3.47
Resistance (Rrs-oscillator, 3 cps), cm H_2O/liter/sec	4.6	...	2.59	2.22
Mid-VC flow ratio $\left(\frac{\text{expiratory vol}}{\text{inspiratory vol}}\right)$	...	...	1.29	0.98

*For a man, the predicted value would be 200 (SE 50).

†Decreased maximal static expiratory and inspiratory pressures and decreased cough pressure are indicative of muscle weakness.

static and specific static compliances were decreased. Stein and co-workers[28] found a decrease in dynamic compliance in 7 of 13 cases. The specific dynamic compliances calculated from their data were also decreased when compared to normal values.[17] Markedly decreased static maximal inspiratory and expiratory pressures, such as we observed, have been found by others[28, 35] when appropriate measurements were included in the evaluation of pulmonary function in cases of thyrotoxicosis. The reduced cough pressure parallels the decrease in maximal static expiratory pressure. We found a normal pulmonary-flow resistance, normal total respiratory resistance, and normal retractive force. Others have found a normal pulmonary-flow resistance[18, 28] and retractive force,[18] but total respiratory resistance has not been measured. The normal nitrogen index, normal saturation of hemoglobin, and normal carbon monoxide diffusing capacity (DL_{CO}) have been recorded in other studies.[18, 28]

The defect which appears to underlie most of the changes in pulmonary function found in our case and reported by others is the weakness of the respiratory muscles. Respiratory-muscle weakness would readily explain a decrease in vital capacity and inspiratory capacity, the occasional decrease in MBC, the decrease in peak inspiratory and expiratory flow rates, the decrease in cough pressure, and the decrease in maximal static inspiratory and expiratory pressures. A decrease in abdominal muscle strength[22, 35] would explain an increase in residual volume. Particularly during exercise, patients with thyrotoxicosis breathe at higher respiratory frequencies and with lower tidal volumes than do normal subjects.[18, 28, 34] Weakness of the respiratory muscles would prevent an increase in tidal volume; thus, the patient would have to increase the respiratory rate in order to maintain the ventilation necessary for gas exchange during exercise. At rest, the ratio of the volume of gas expired per minute to the amount of oxygen consumed per minute (V_E/V_{O_2}) is normal,[18, 28] but with exercise the ventilation rises in excess of the oxygen uptake (the V_E/V_{O_2} increases to above normal) owing to the restricted tidal volume. The result is a normal alveolar ventilation at rest[34] and with exercise[18, 28] although alveolar ventilation may become excessive with exercise.[18] Reduced compliance would also result in a similar breathing pattern, but since this has not been found in all cases, it seems likely that the observed pattern is due to respiratory-muscle weakness.[18] There is no explanation currently for the reduction in dynamic and static compliance observed in some cases.[28]

Both the steady-state and single-breath DL_{CO} are normal at rest.[28] The steady-state DL_{CO} increases with exercise, but the rise is less than expected for the level of oxygen uptake.[18] Massey and co-workers[18] suggested that since the rise in cardiac output is also excessive in relation to oxygen uptake, the explanation offered by Stein and co-workers[28] that a rapid pulmonary capillary red-blood-cell (RBC) transit time could affect the diffusion of gases might be operative in explaining the blunted rise in the DL_{CO} with exercise. The facts that the arterial saturation is normal at rest and during exercise[18, 28] and that the rate of oxygen uptake is normal during exercise[18] suggest that the pulmonary diffusion of oxygen is normal in these cases. It seems that changes in RBC capillary transit time have not affected oxygen diffusion and should not influence carbon monoxide diffusion as measured by the steady state DL_{CO}, since it is independent on flow.[27, 33]

As others[3, 6, 10, 26, 28, 34, 35] have found, the pulmonary function of our patient returned toward normal after therapy. Ramsay[25] found that, on the average, the power of skeletal muscle fully returned to normal in 2.2 months.

Although skeletal-muscle weakness is a common accompaniment of thyrotoxicosis,[21, 25, 32] weakness of the respiratory muscles has been rarely described in cases of acute or chronic thyrotoxic myopathy.[6, 19, 21, 22, 32] Formerly it was thought that instances of isolated respiratory-muscle weakness were probably due to associated myasthenia gravis.[6, 21] Death owing to such weakness has been reported in cases of thyrotoxicosis,[19, 22, 32] but myasthenia gravis was not excluded in the cases reported in the references cited. Studies which have included actual tests of the power of respiratory muscles[28, 35] have shown that respiratory-muscle weakness is probably a common accompaniment of thyrotoxicosis. No one has investigated how frequently respiratory-muscle weakness occurs or whether it can occur as an isolated lesion or only in association with generalized involvement of the skeletal musculature. The ease with which maximal static inspiratory and expiratory pressures can be obtained with the maximal-respiratory-pressure device described by Black and Hyatt[2] should make the answers to these questions relatively simple.

The mechanism by which an excess of thyroid hormone causes skeletal-muscle myopathy has not been completely elucidated. The reflex arc is normal.[15] Gold and co-workers[8] have shown that the duration of muscle action is shortened in the muscles of hyperthyroid rats. If the results of this study can be applied to man, this finding suggests that the complete fusion of contractile events is prevented. This would lead to reduced muscle tension and weakness. At the cellular level, Hoch[11] has shown that the mitochondria in muscle cells are adversely affected, and he proposed that uncoupling of oxidative phosphorylation occurs. The recent finding of Stocker and co-workers[30] that the ratios of phosphorus to oxygen (P:O) are normal in slices of muscle tissue obtained from patients with thyrotoxic myopathy argues against Hoch's postulate. The finding of Massey and co-workers[18] that the rate of increase of oxygen uptake with respect to work was normal also implies normal coupling of oxidative phosphorylation.

Both respiratory-muscle weakness and reduced compliance could cause the "length-tension inappropriateness" which Campbell and Howell[4, 12] propose as a mechanism underlying dyspnea. Stein and co-workers[28] showed that the exercise-induced dyspnea of thyrotoxic patients was relieved immediately by breathing oxygen, even when the patient was unaware that he was breathing oxygen. Not only did dyspnea disappear but the respiratory rate fell. These changes occurred in spite of normal arterial saturation before the breathing of oxygen was initiated. This suggests that besides "length-tension inappropriateness" an additional factor is operative in producing exertional dyspnea in these subjects and that it is related to the demand of muscle for oxygen.[28]

Summary and Conclusion

A case of thyrotoxicosis is presented, in which the patient had the following changes in pulmonary function: decreased vital capacity, increased residual volume, decreased maximal static inspiratory and expiratory pressures, decreased cough pressure, decreased expiratory flow rate, and decreased specific dynamic and static compliances. Except for the change in compliance, these alterations can be explained by the weakness of the respiratory muscles.

In thyrotoxicosis, respiratory-muscle weakness — as measured by the static maximal respiratory pressures and cough pressure — seems to be a common feature. The frequency with which it occurs in patients with thyrotoxicosis with or without generalized muscle weakness is not known.

The common complaint of dyspnea of thyrotoxic patients, when other causes of dyspnea have been eliminated, may be related to "length-tension inappropriateness" and to the demand of muscle for oxygen. Which of these two (or other) mechanisms is more important is not known.

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On the Relationship Migraine — Epilepsy

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MIGRAINE is not a single disorder, but rather a syndrome of disorders which different people will experience in somewhat different ways. For many years, various authors have postulated a relationship between migraine and epilepsy. Signs and symptoms of migraine similar to those found in the epileptic are these: (1) Migraine, like epilepsy, is a recurrent symptom complex; (2) There is visual aura, usually scotomata, preceding the migraine; (3) Central nervous system disturbance is present, namely, aphasia, vertigo, memory loss, impaired concentration, and diminished power of thought, psychic stimulation, and euphoria; (4) The onset of the headache may be retroorbital, supraorbital, or temporal, throbbing at first, accompanied by nausea, vomiting, weakness, perspiration, excess salivation, and localized or generalized edema; (5) Some patients may show equivalents similar to those seen in the epileptic, i.e., cyclic vomiting, acidosis, vertigo, paroxysmal arrythmias, precordial distress, recurrent bouts of abdominal pain, hemianopsia, amblyopia, and extraocular muscle palsies.

History

The first suggestion of a possible relationship between migraine and epilepsy was probably that of Liveing[1] in 1873. Gowers,[2] in his "Borderland of Epilepsy" related migraine and epilepsy with certain types of vertigo. Hughlings Jackson,[3] in 1875, recognized a relationship between certain cases of migraine and epilepsy. Many other authors including Lennos,[4] Ely,[5] and Buchannan[6] supported this concept.

Etiology

Some of the etiologies considered in the pathogenesis of migraine, other than epilepsy, have included vascular, allergic, endocrine imbalance, electrolyte disturbance, heredity and stress. (1) The vascular etiology of migraine is well-known and will be discussed in the section on pathophysiology. (2) Allergy. The relationship between migraine and allergy has intrigued many observers for many years. Histamine sensitivity has been thought to be involved in migraine, and histamine injection in some migraine patients may precipitate a headache, but whether it is merely the reaction to a vasodilator remains uncertain. It is known that antihistaminics have been of little value in migraine therapy. (3) Endocrine imbalance —no significant correlation with endocrine imbalance has been found. (4) Electrolyte disturbances — while electrolyte disturbances may occur secondarily with the vomiting, none have, to date, been correlated with the causation of the headache. (5) Heredity. This is the most important factor since 50 to 75% of the patients have a family history of this disorder. Environmental factors may play a role in precipitating a migraine attack in an otherwise predisposed patient. (6) Stress. Stress of any kind especially emotional disturbances, and stressful life situations appear to be a significant antecedent factor. The incidence is lower in manual laborers, and in those living in rural areas. Hostile and aggressive feelings are common in these patients.

Frequency

Migraine occurs in 5 to 10% of the population and there is a ratio of 2:1 in favor of females having the disease. The onset is primarily in late adolescence and young adult life although it has been frequently noted to begin in childhood.

Pathophysiology

A possible explanation of the pathophysiologic changes underlying the development of the migraine headache has been postulated: (1) Vasoconstriction of blood vessels supplying certain areas of the brain, primarily cerebral cortex and retinal vessels, are probably responsible for the auras preceding the onset of the headache; (2) Vasodilatation of the cranial arteries which become distended and are associated with clinical phenomena of the headache then occurs. The vessels primarily involved are branches of the external carotid artery — the temporal, occipital, and middle meningeal being the most common. They have a high incidence of pulsation coinciding with the beginning of the attach. Headache is relieved with vasoconstrictor agents; (3) During the state of vasodilatation, with distention of the vessels and high amplitude of pulsation, there is an increased exudation of fluid into the perivascular tissues resulting from increased arterial and capillary permeability and this edema leads to a lower pain threshold and increased severity of the headache; (4) Persistent vascular dilatation causes them to become rigid and the headache becomes steady and continuous. Scalp and neck muscle pain may augment the headache.

EEG Findings

Abnormal EEG findings, such as the much disputed 14&6/sec positive spike pattern, may be present in migraine without it being epilepsy, and Dr. Dennis Whitehouse,[7] and his group concluded that "it does not seem wise to regard the 14&6/sec positive spike pattern as necessarily indicative of a seizure disorder in terms of a need for anticonvulsant therapy." EEG dysrrythmia may occur in 10% of the asymptomatic population, but it is found more frequently in epilepsy and migraine. EEG abnormalities may be intensified by hyperventilation in migraine, although the EEG during the attack is basically different from that found in epilepsy. There have been described groups of high monomorphic slow waves frontally and accentuated with hyperventilation. There are two explanations for the EEG abnormalities in migraine: (1) After hypoxemia, secondary to the vasospasm of migraine, residues may be projected electrically from the cerebrum; (2) It may be a form of cerebral run-off in migraine.

Associated Conditions

In addition to tumors, migraine may also occur with cerebral defects such as hydrocephalus and microventricular formations, aneurysms, hemangiomas, and carotid artery stenosis. Epileptic attacks may be due to cortical irritabilities secondary to hypoxemia. Barolin[8, 9] has described migraines with confusion, disorientation, and hallucinations, which he postulates may strongly resemble temporal lobe epilepsy. The association of syncope and migraine is understandable in that they are both caused by vasolability. In the opinion of Barolin, migraine and epilepsy occur together only coincidentally; however, he does admit to the possibility that epileptic manifestations at the height of the migraine attack may be due to circumscribed foci of cerebral hypoxemia.

Some of the symptoms of migraine have been reappraised in the light of the increased awareness of the functions of reticular formation in the brain stem in arousal and consciousness, and of symptoms produced by changes in the circulation in the basilar and posterior cerebral arteries. Bickerstoff, in 1961, introduced the concept of basilar artery migraine. Lees and Watkins[10] describe symptoms associated with basilar artery migraine: bilateral visual disturbances, ataxia, dysarthria, vertigo, tinnitus, and bilateral peripheral dysesthesiae, followed by occipital headache. They think that a basilar artery system disturbance may lead to a dysfunction in the brain stem and occipital cortex of both sides. They go on to suggest that during migraine attacks transient ischemia of reticular formation may be responsible for loss of consciousness.

Gowers,[12] in 1907, described the features which may differentiate epilepsy from migraine when there is loss of consciousness: (1) In migraine, the attack has a long prodrome, and is often followed by sensory symptoms in both hands followed by headache which is out of proportion to the severity of the disturbance of consciousness; (2) Emphasis is laid on the paresthesias of lips and tongue and bilateral visual disturbances; (3) Epilepsy and migraine may be slightly related and one could uncommonly replace the other; (4) Definite epilepsy could manifest itself at the height of the attack of migraine as an indirect consequence of the intense pain and associated cerebral disturbance.

Therapy

One must be careful to avoid the assumption that there is a therapeutic correlation in the treatment of migraine and epilepsy which places both conditions in direct relationship to each other. Ever since Buchannan reported in 1921 on the distribution of migraine epilepsy, various authors have attempted to treat the disturbances of migraine with the usual anticonvulsant medication such as phenobarbital and diphenylhydantoin (Dilantin). While these are exceptionally good medications in the control of migraine, we do not know if the migraine would not, independently of a possible association with seizures, respond to these drugs. It would seem equally valid to treat the attacks of migraine, on the basis of vascular disturbance alone, with methysergide maleate which is thought to act as an antiserotonin agent, or a mild vasoconstrictor. The ergot preparations have a similar action on the blood vessels.

Carrying this relationship one step further, one could postulate some effect on cerebral edema by decreasing the vasodilatation and exudation of fluid into the peripheral tissues. In this case, a mild dehydrating agent might also be effectively used.

The vascular response to Dilantin must also be taken into consideration when one is evaluating its therapeutic efficacy in the control of migraine.

In conclusion then, one might consider migraine as a precursor of epilepsy or as a fortuitously associated condition. The fact that epilepsy may be provoked by vasospasm and cerebral anoxia has been proved by neurophysiologists. It would, therefore, seem to the authors to be perfectly rational that one could assume a direct relationship between migraine and epilepsy, in that migraine is one side of the spectrum, and epilepsy the other. Various atypicalities may exist in the intermediate zone. This, however, would rest entirely on clinical evidence, and is not necessarily correlated with the findings of EEG abnormalities.

Summary

The authors have attempted to achieve some degree of order out of the chaos of the dispute concerning a possible relationship between migraine and epilepsy. A possible etiologic mechanism common to both forms of disorder has been postulated, and a direct relationship has been shown to be rationally possible. Both disorders may be corrected by a standard anticonvulsant. However, Dilantin is to be used with the full realization that the vasoactive component of the Dilantin may be what is truly responsible for the improvement in migraine headaches. It would seem to the authors, therefore, that the drugs of first choice would be the conventional anticonvulsants, namely phenobarbital and Dilantin, with the secondary drugs of choice being the serotonin inhibitors methysergide maleate, and the ergot preparations.

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Operation Retrieval

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GROUP interaction in the revitalizing process does for the chronic schizophrenic patient what soaking in water does for dried prunes. Minimal ability to interact with others has been mentioned in clinical literature as being a characteristic of chronic schizophrenic patients.[1] The retreatment and rehabilitation team at the Nebraska Psychiatric Institute felt this to be subject for exploration.

In 1965, chronic schizophrenic patients from other state hospitals were retrieved from long term care and placed in the retreatment and rehabilitation program at Nebraska Psychiatric Institute. Arrangements were made to begin regularly scheduled patient meetings; this group is still in existence.

The group consisted of women, ages 22 to 27, who had been hospitalized for 2 to 15 years in state hospitals. The goals of the program were to return these patients to the community and to help them to become self-sufficient. A group treatment approach permits a greater number of patients to be seen by each therapist for psychotherapy and after-care. We feel group interaction is especially suited to patients who need to learn social and interpersonal relationship skills.

We felt that bringing these patients together would provide the opportunity for regular follow-up with minimum time spent by both staff and patient, and to ascertain if patients were taking their medications regularly. The group meeting would offer patients the opportunity to talk over the beginning symptoms of illness that they could recall, and to exchange ideas of awareness of these symptoms.

This posed interesting questions. Could or would the chronic schizophrenic verbalize past failures and symptoms that resulted in hospitalization? Would these experiences serve as a source of benefit and contribute to a patient staying out of the hospital?

Group meetings were held twice a month. Attendance was voluntary. Evening hours were chosen for two reasons: first, evening meetings did not interfere with patients' work or training hours; second, it subtly reduced the idea of hospital from an authoritarian level to a neutral level. That is, the hospital changed from "This is a part of your treatment," to "This is a place where you can spend part of your evening talking about life as you see it."

The site of the meeting was a room similar to a dining room in any home. The patients sit around the table, drinking coffee and talking. They discuss what they now feel were symptoms of their illness just prior to commitment to a hospital. They become acutely aware of these symptoms, to the point that when they experience peculiar feelings, they inform the group of this, and get the reactions of their peers.

Often a patient will share with the others what occurred at the time of her own hospitalization. In some instances when symptoms arise, patients have requested rehospitalization for a short period of time to restabilize. These women have used the group to keep each other conscious of the need to take medication as prescribed. This, in turn, has led to alerting the group leader to the need for new prescriptions before a crisis occurs. Patients have used the meeting to request appointments with the project physician, and referral for medical help is made quickly. In a few instances, serious debilities have been averted. When the complaint is evaluated as part of the mental illness, it can be more quickly identified with the patient. Subsequent exploration with the patient unearths factors contributing to the rise of the symptom.

Patients find it most helpful to talk about job problems. They discuss disagreements with co-workers and bosses. They give suggestions to each other on how many different ways there are to handle a problem. Group members have been both critical and supportive with each other. They verbalize real feelings of discouragement and depression when any have been fired, laid off, or cannot find work. The women have discussed their worries about handling money, and some of them have talked about their inability to organize and follow a budget.

Grief at being rejected by families finds expression and is accepted by the other members. They draw from each other's experience in finding substitutions for family relationships. In some instances, a member of a patient's family has died. The patient invariably brings the news to the group, and is able to verbalize feelings about the loss. In some instances, relief has been found through crying.

Patients live in regular community boarding houses. The Vocational Rehabilitation Division pays the expenses for the first two to three months, or until the patient has accumulated sufficient funds to pay her own board and room. While this is of some suport to the patient, it does create some difficulty. Patients feel, generally, because the board and room is being paid by someone else, that they have no right to complain if dissatisfied with conditions. However, because they can bring their complaints to the group and know they will be received, there is less tendency to withdraw or retreat into illness.

The opportunity to ventilate and exchange ideas in the group has afforded some of the patients a way to talk out mixed feelings about resuming responsibilities for their children. Some of the patients have been married, and their children have had to be placed with relatives or in foster care. Patients tend to have plans to resume the care of their children, once they are employed. In most instances, this is unrealistic, not only from the standpoint of lack of finances and living arrangements, but also because of the children's desire not to make a change. Also, the chance of recurrence of illness is possible with these patients. Gradually, the patient comes to realize this, and recognizes that prolonged absence from the home and constant uprooting suffered by the children can lead to emotional damage. As patients realize this, they are able to modify their roles with the children. They can be supportive in concrete ways while not disturbing the status quo. When the patient is able to see the positive aspects of not dividing the children's loyalties, and not uprooting them from a more stable environment, she is better able to focus on her own problems.

In most instances, our patients have entered into work evaluation and adjustment programs at a local sheltered workshop. The patients find the group gives them an opportunity to express their opinions about this placement. Initially, the comments in the group reflect negative feelings as compared with being placed in competitive employment. Mainly this attitude arises from feelings of being labeled as inadequate. As they move through the workshop, the attitude changes to appreciation for the opportunity to develop new skills or refine old ones. At the point of termination from the workshop, there is much anxiety about obtaining a job and being able to hold it. The group meeting has served as a sounding board to express anxiety and fear, as well as being a source of support. Self-confidence and self-reliance have come from talking out feelings with each other.

When they first leave a hospital, patients are confronted by an alien world. The group meetings offset this somewhat, by promoting success in relating to each other. With few exceptions, the ladies have been able to use this success in establishing social contacts in the community.

Community resources such as the Y.W.C.A., church groups, Recovery Incorporated, and the dual status program at the Institute have met the needs of these patients for becoming involved with people. In turn, this has resulted in much more interest in community, national and international affairs. It has also had a definite bearing on personal appearance. As more involvement in the community has occurred, there has been a noticeable increase of interest in going to the beauty shop, in buying stylish clothes, and acquiring makeup and beauty aids. Contact with people in the community has contributed to more reasonable use of these products.

We all, including patients, feel the group meetings have value. Of the 27 women who have been involved in the group, 9 had to be returned to the state hospital. The remainder are all out of the hospital and are living in the community. None has been placed in nursing homes.

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Management of Obstructive Bronchopulmonary Disease*

PART II

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9. *Treatment of CO_2 Retention*

Because of inefficient alveolar ventilation, the carbon dioxide clearance is impaired in OBD, which causes CO_2 retention and in an acute phase, respiratory acidosis. When the arterial blood gas reveals a CO_2 retention, the use of intermittent positive pressure breathing (IPPB) becomes a necessity. Although there are many respirators on the market, these may be divided into two types: one is the pressure-cycled respirator and the other is the volume-controlled respirator. The currently popular products such as the Bird or Bennett machines, are basically pressure-cycled. The Bird Mark VII series has a maximum pressure up to 40 cm of water with a maximum flow rate of 80 liters per minute. Similarly, the Bennett PR-1 series produces a maximum pressure up to 45 cm of water with a maximum flow rate of 80 liters per minute. A relatively new product, the Bennett MA-1, has a higher pressure range of up to 60 cm of water with a maximum flow rate of 100 liters per minute. The Bennett MA-1 is a useful instrument which can be used effectively in the Respiratory Intensive Care Unit and in the Emergency Room service. On the other hand, the Bird Mark VII and the Bennett PR-1 are commonly used at the bedside or in inhalation therapy. In postsurgical patients or in extensive pulmonary infection with low pulmonary compliance, the pressure - cycled respirators are often insufficient to maintain an adequate alveolar ventilation. In such a case, the volume-controlled respirator (with piston operation) must be used. In this category, the Emerson postoperative ventilator is available and this ventilator can generate a pressure up to 160 cm of water. Needless to say, the use of a respirator for IPPB must be closely followed by a series of arterial blood gas analyses.

Another important aspect in the management of CO_2 retention is the treatment of acute respiratory acidosis which is manifested by a high level of standard biocarbonate and a low arterial pH. When the arterial pH is reduced below 7.2 the intravenous infusion of bicarbonate or lactate is warranted. It is also known that the bronchodilatory effect of xanthine preparations is significantly diminished in severe acidosis. In some cases of chronic respiratory failure with severe CO_2 retention, the use of respiratory stimulant, Ethamivan may prove to be effective.

10. *Control of Allergy*

In some patients with OBD, the control of allergens is of importance. Thus, the skin test, desensitization treatment, and the avoidance of allergens must be given a serious consideration. This is particularly so in young children with allergic bronchitis. In this regard, consultation with a competent allergist is essential.

11. *Cardiac Care*

In obstructive bronchopulmonary disease, the cardiac problem is also frequently encountered. Although the effectiveness of digitalis in right heart failure has been traditionally questioned, digitalis is useful and is recommended in all patients with cor pulmonale because it has been shown that in the majority of OBD, not only the hemodynamics of the right heart but also that of the left heart are disturbed. In the author's series, approximately 60% of OBD patients showed an increased cardiac output.[5] In addition, the diuretics such as ethacrynic acid (Edecrin), furosemide (Lasix), and thiazide preparations are useful drugs in a patient with congestive heart failure and/or pulmonary edema. Along with these medications, the use of oxygen and bedrest are routine measures in right heart failure.

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The cardiac arrhythmias are not uncommon in chronic lung patients, particularly the right bundle branch block and atrial fibrillation. In addition, the digitalis toxicity is seen terminally and the incidence of myocardial infarction in OBD is as frequent as that of the general population.

12. *Treatment of Associated Diseases*

Obstructive bronchopulmonary disease is often associated with other diseases, among which the most important are peptic ulcer, pneumonia, cancer of the lung, and pulmonary thromboembolism. Much less frequent but equally important are pneumothorax, silicosis, pulmonary tuberculosis, sarcoidosis, bronchiectasis, and chronic interstitial fibrosis. The effective control of associated diseases is a prerequisite for the successful management of OBD.

13. *Surgical Approach*

One of the least explored areas in the treatment of OBD is the surgical approach. It is generally accepted that an isolated, large bullous emphysema should be removed because such a lesion is a source of disturbance in the mechanics of breathing and its elimination improves the patient's symptoms and prognosis. It is the author's opinion that the same surgical approach may be applied to diffuse pulmonary emphysema. Strictly speaking, "diffuse" pulmonary emphysema is not homogeneously diffuse in many cases.

As can be readily appreciated from the routine chest x-ray film, lung scan, or selective pulmonary angiogram, a discrete, severely cystic area is usually identifiable in the advanced cases of "diffuse" pulmonary emphysema. Therefore, there are reasons to believe that the elimination of a predominantly emphysematous region (usually by lobectomy) may improve the patient's symptoms and prognosis. The author's experience along this line of approach is in a study[6] with Doctor William E. Brownlee who operated on 15 far-advanced, "diffuse" pulmonary emphysema patients. The patients were all nearly terminal and practically bedridden because of extreme shortness of breath. After radiological identification of a predominantly bullous region, lobectomy involving one or two lobes was performed. Among 15 patients, approximately 50% showed a great deal of improvement. A comprehensive study of lung function and pulmonary hemodynamics before and after the surgery indicated that the patients with a vital capacity of less than 50% and the RV/TLC ratio of more than 75% did poorly following the surgery. However, the patients with vital capacity of more than 60% and the ratio of RV/TLC of less than 75% had a significant improvement. Parameters such as the FEV_1, arterial oxygen saturation, arterial PCO_2 or pulmonary diffusion capacity, were not useful in gauging the prognosis of surgery. In terms of pulmonary hemodynamics, patients with pulmonary hypertension and increased pulmonary vascular resistance did poorly after surgery. However, patients who had mildly increased pulmonary vascular resistance without pulmonary hypertension all survived the surgery and did well, returning to ambulatory activities.

In patients with acute respiratory failure where endotracheal intubation is needed for the assisted ventilation and for the removal of mucus, the procedure may be performed at bedside, if necessary. However, the patient should be immediately transferred to the Intensive Respiratory Care Unit because a patient with endotracheal intubation requires continuous care and monitoring. The regular and frequent suction of mucous secretion using a sterile technique, a reguar deflation of inflation cup, the optimum use of IPPB treatment, and a serial determination of arterial blood gases along with cardiac monitoring require special nurses and paramedical personnel who are trained in intensive respiratory care.

It is wise to limit the placement of an endotracheal tube to no more than 72 hours, because the mechanical irritation of the bronchial mucosa is so great. If a patient needs a continued use of assisted ventilation more than 72 hours, then tracheostomy should be considered. In patients with continuous secretion of mucus, the tracheostomy opening may be left unclosed, and patients are trained to change the tracheostomy tube by themselves, using a sterile technique. In this way, some patients can maintain good bronchial hygiene with regular suctioning and expectoration through the tracheostomy opening for many months and sometimes years.

14. *Physiotherapy*

One of the most apparent disturbances in OBD is the derangement of the mechanical properties of the lung. Due to the airway obstruction, which is limited predominantly to the period of expiration, the lung continues to expand in volume beyond its normal limits and in doing so displaces the diaphragm downward. In addition, the chest cage itself increases its diameter to accommodate the expanding lung. The result is the flattened diaphragm and the barrel-shaped chest. The success or failure of a training program of breathing exercise largely depends on how well a patient understands the nature of airway obstruction and the abnormal mechanical status of the diaphragm. It is not uncommon to find patients who are allegedly trained for breathing exercise by physiotherapists, and yet perform the breathing exercise in a most unphysiological manner by inhaling air while elevating the diaphragm. The relationship between the upward and downward movements of the diaphragm and the phase of respiratory cycle, i.e. inspiration and expiration, must be clearly explained to the patients, using a large diagram of the chest, if necessary. In normal man, the movement of the diaphragm contributes to nearly 50% of the tidal volume. In OBD with flattened diaphragm, this share of contribution is reduced. Therefore, the movement of the diaphragm has to be assisted manually either with hands placed on the upper abdomen or with a sand bag of appropriate weight on the abdomen. The patient exhales while pushing his diaphragm upward. During this period of expiration, the patient is asked to make "pursed-lips" to prevent the collapsing of the major airways.

In a patient who has a considerable element of chronic bronchitis with sputum production, bronchial hygiene is quite effective. This is often performed with the patient's head down in lateral, supine, and prone positions. This is sometimes called postural drainage. Tapping of the chest wall either by hands or a mechanical vibrator is usually done as the patient expectorates.

Along with the breathing exercise and bronchial hygiene, the physical reconditioning of the patient by means of stationary bicycle, treadmill or by indoor or outdoor walking is valuable, because this gives the patient a definitive daily goal of activity as well as an objective means of quantitating his physical improvement. It must be added here that patients with OBD tend to limit their physical activity because of shortness of breath and easy fatigability. Therefore, they must be given a certain daily goal of physical activity in accordance with the individual level of tolerance, and an objective way to assess their improvement.

15. *Disability Evaluation*

An increasing number of patients with OBD are now claiming local and federal compensation for disability. The evaluation of disability is a complex task, and since the number of OBD patients is increasing at an alarming rate, a serious thought must be given to establishing a fair and just standard for compensation.

Medically speaking, there is a reasonably objective way of quantitating the degree of functional impairment of respiration. A comprehensive lung function test, which includes spirometric, arterial blood gas and pulmonary diffusion capacity measurement is most essential in this regard. Recently, an attempt was made to classify the pulmonary impairment into five classes, by Gaensler and Wright[3] employing the clinical sign of dyspnea, chest x-ray films, and lung function data. This classification is by no means perfect, but it represents one of the best standards available in the literature and is shown in Table 2.

Class 0 has no dyspnea on rest or on severe exercise. The chest x-ray is normal, and so is lung function. However, with mild impairment, in Class I, patients will show dyspnea on severe exertion, and the chest x-ray is usually normal or occasionally ab-

Table 2

CLASSIFICATION OF OBSTRUCTIVE PULMONARY IMPAIRMENT

	Dyspnea	Chest X-ray	Lung Function
Class 0 (none)	At rest (-) On severe exertion (-)	Nl	Nl
Class I (mild)	At rest (-) On severe exertion (+)	Nl or Abnl	FEV$_{1.0}$ 60%+, VC 60%+, RV 150%- ABG nl, D$_L$ 65%+
Class II (moderate)	At rest (-) On mild exertion (+)	NL or Abnl	FEV$_{1.0}$ 40%+, VC 50%+, RV 175%- S$_{O_2}$$\downarrow$, D$_L$ 50%+
Class III (severe)	At rest (+) On mild exertion (++)	Abnl	FEV$_{1.0}$ 40%-, VC 35%+, RV 200%+ S$_{O_2}$$\downarrow$, P$_{CO_2}$$\uparrow$, D$_L$ 50%-
Class IV (very severe)	At rest (+) On slightest exertion (++)	Abnl	FEV$_{1.0}$ 40%-, VC 35%-, RV 200%+ S$_{O_2}$$\downarrow$, P$_{CO_2}$$\uparrow$, D$_L$ $\downarrow\downarrow$

Abbreviations:

Nl= Normal, ABG= Arterial blood gas, FEV$_{1.0}$ = Forced expiratory volume at one second, VC= Vital capacity, RV= Residual volume, S$_{O_2}$ = Arterial O$_2$ saturation, P$_{CO_2}$ = Arterial CO$_2$ tension, D$_L$ = Pulmonary diffusion capacity

Arch Environ Health 12:146-189, 1966

normal. The lung function test reveals airway obstruction of a mild degree, as shown by the FEV$_1$ of 60% and the vital capacity is 60% or more. The residual volume is increased mildly, up to 150% of the predicted normal, but the arterial blood gases are usually normal and the pulmonary diffusion capacity is 65% or better than the predicted normal. In Class II, with a moderate degree of impairment, the patients show no dyspnea at rest but show dyspnea on mild exertion. Again, the chest x-ray is either normal or abnormal. However, this group shows a little more disturbance in the lung function test. The FEV$_1$ is reduced to 40% and the vital capacity is down to 50%. The residual volume may be increased up to 175%. In some cases, the oxygen saturation is reduced and the pulmonary diffusion capacity is reduced up to 50% of the predicted normal. In Class III with severe impairment, the patients show dyspnea at rest as well as on mild exertion. Usually, the chest x-ray is definitely abnormal and the lung function test shows a considerable disturbance. The FEV$_1$ is reduced below 40% of the predicted normal and the vital capacity may be reduced to 35% of the predicted normal. The residual volume is usually more than doubled and the arterial oxygen saturation and the arterial CO$_2$ are disturbed and the pulmonary diffusion capacity is below 50% of the predicted normal. In Class IV with very severe impairment, patients show dyspnea at rest as well as on slightest exertion. The chest x-ray is abnormal, and the lung function test reveals severe airway obstruction as shown by the FEV$_1$ of less than 40% of the predicted normal. The vital capacity is less than 35%. The residual volume is usually more than doubled, and there is a marked arterial oxygen desaturation, marked CO$_2$ retention and severe impairment of the pulmonary diffusion capacity. Table 2 is useful in defining specifically what we mean by the terms of "mild," "moderate," "severe," and "very severe" impairment.

In conclusion, it may be said that there are many therapeutic approaches currently available to the patient suffering from OBD. The outright pessimistic attitude to this disease is not warranted, because a keen interest and enthusiasm, coupled with competent diagnostic services can help these patients in controlling chronic respiratory infection, minimizing airway obstruction, preventing cor pulmonale, and in reorientation of the patient to a reasonably stable and comfortable level of daily living. The treatment has to be individually tailored because of the diversity of symptoms and manifestations and here is where an intimate doctor-patient relationship becomes of paramount importance. There are numerous cases in which the patient's condition has been "stabilized" under proper medical management, and it is hoped that further improvement in the treatment of OBD will become possible with the advancement in research in this field.

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Salivary Gland Tumors

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and
W. S. CARTER, M.D.†

TUMORS arising in the salivary glands are relatively common. Unfortunately, many misconceptions concerning these tumors are also common, and it therefore seems appropriate to review the principles of management and treatment of these lesions from time to time.

There are a number of basic principles which should be constantly kept in mind when considering the possibility of a salivary gland tumor. These principles are based primarily upon the peculiar anatomy and relationships of the salivary glands, the statistical possibilities as far as diagnosis is concerned, and the success rates of various modalities of treatment which may be applied.

The first principle that should be considered is that involving the use of open biopsy in the diagnosis of salivary gland disease. In the parotid gland, a superficial lobectomy with dissection and complete identification of the facial nerve should be considered a minimum diagnostic or therapeutic operative procedure. Open biopsy of the parotid gland carries with it the danger of injury to the facial nerve, seeding of tumor cells due to incisional rather than excisional biopsy, and the creation of a difficult subsequent surgical dissection following inadequate initial treatment. With tumors of the deep lobe of the parotid, obviously a superficial lobectomy is necessary to obtain adequate exposure and protection of the nerve for procedures on the deep lobe. In the submaxillary area, it is well recognized that total removal of the gland is far more advantageous than subtotal removal with its attendant complications such as lingual nerve disfunction, fistulae, and obstructive problems.

A second principle which is not entirely understood is the role of radiation therapy in salivary gland disease. While it is recognized that with diffuse recurrent sialoadenitis, low dose radiation therapy can at times cause atrophy of the gland and resolution of the problem, unfortunately, the results of this therapy take some time to become apparent, and when utilized, the disease is frequently advanced to the state of multiple abscess formation, which requires eventual surgical therapy which may be complicated by postradiation scarring. It should be clearly understood that radiation therapy of tumors of the salivary glands has met with extraordinarily poor results in the vast majority of tumors in this area, and, due to the necessity of surgery in making a primary diagnosis of neoplasms in this area, should be relegated to postoperative radiation for unresectable disease.

A final principle which is frequently poorly understood is that involving the statistical likelihood of malignancy when dealing with salivary gland tumors. While it is true that the vast majority of parotid neoplasms in adults are benign, one cannot make this decision on a clinical basis alone. Moreover, in considering parotid lesions in children, almost one half of the tumors will be malignant. Also, in dealing with the minor salivary glands, a high incidence of malignancy is seen in the submaxillary gland, and an even higher rate in the minor glands of the hard and soft palate and oral cavity.

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It should also be emphasized that surgery of the salivary glands should not be considered a casual undertaking. Many surgeons with little experience in this area feel that it is a matter of principle or status symbol that one should be able to do parotid surgery. Such is not the case. If one is to avoid complications and provide adequate treatment for the complex disease processes which occur in this area, both experience and training in the technical procedures as well as a knowledgeable and experienced pathologist are required. While it is usually possible to graft or repair an injured facial nerve, it is far better to have the nerve uninjured. In our experience over a two year period, from 1966 through 1968, in a series of 20 salivary gland resections for benign disease, no facial nerve injuries occurred, and only one temporary fistula occurred as a complication. In our experience with malignant disease in the salivary glands, planned resection of the facial nerve is usually undertaken with associated procedures to relieve the after-effects of this procedure.

Classification and Treatment

Classifications of salivary gland tumors exist based upon type of tissue of origin of the tumor, clinical behavior of the tumor, and other characteristics. A simple classification which we have used is as follows:

I. Benign Tumors
  a. Warthin's tumor (papillary cystadenoma lymphomatosa)
  b. Benign lympho - epithelial lesion (not a true neoplasm)

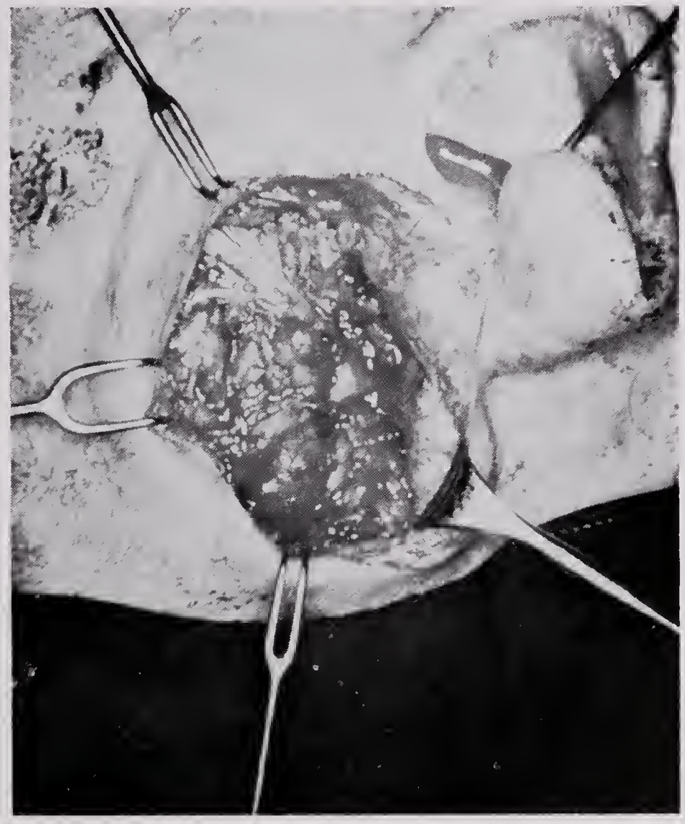

Figure 1. Typical dissection of the superficial parotid lobe exposing the facial nerve and a deep lobe tumor.

c. Oncocytoma (oxyphil cell adenoma)

d. Hemangio — epithelioma

e. Miscellaneous (fibroma, plasmocytoma, neurilemmoma)

f. Mixed tumor (pleomorphic adenoma)

II. Malignant Tumors

a. Epidermoid

b. Adenoid-cystic (cylindroma)

c. Muco-epidermoid

d. Acinic cell

e. Adenocarcinoma (mucus-producing adenopapillary, anaplastic)

f. Miscellaneous (sarcoma)

The most common tumor of the salivary gland origin is the benign mixed tumor, or pleomorphic adenoma. This accounts for approximately 70 to 75% of all salivary gland tumors, being more common in the parotid

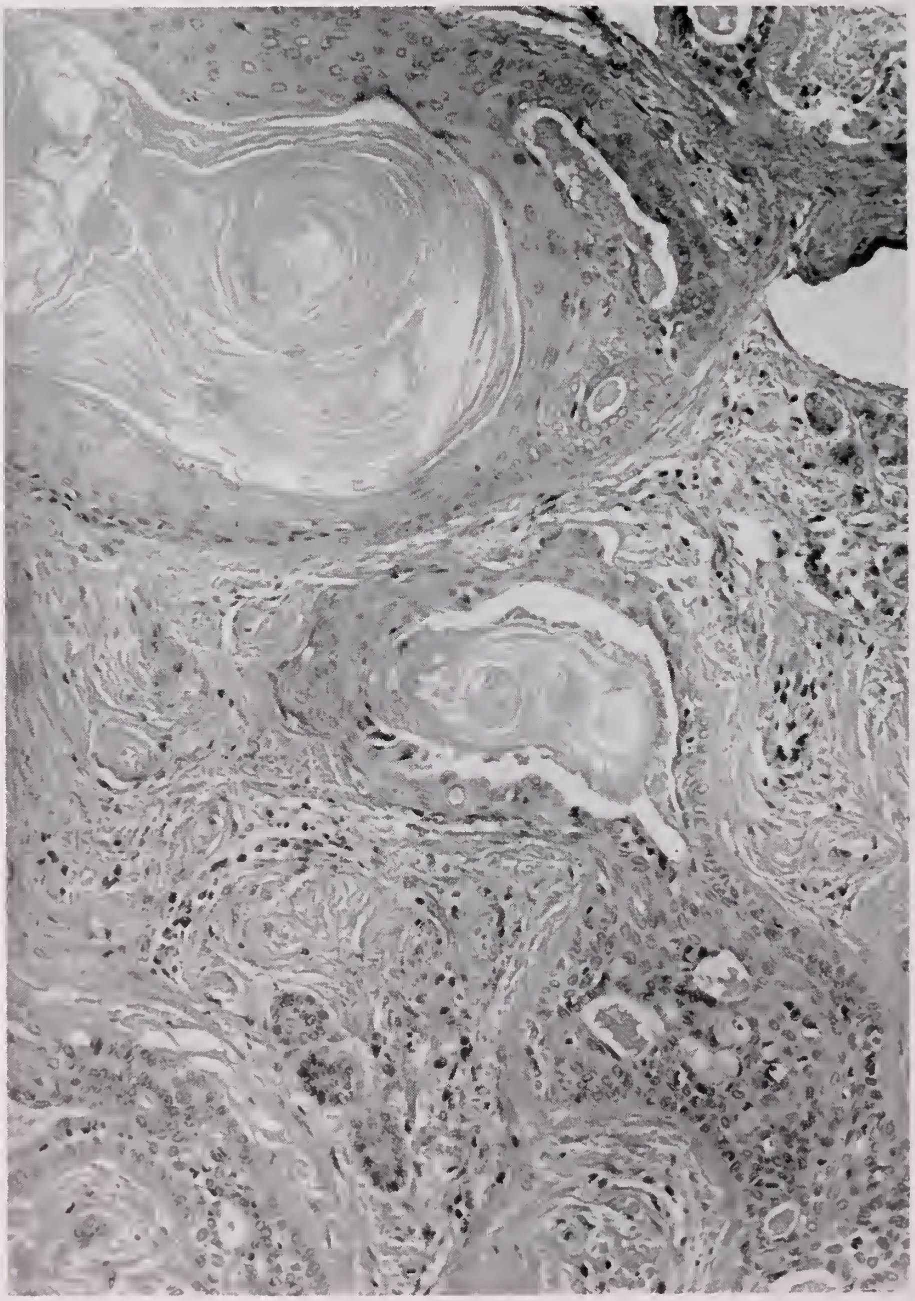

Figure 2. Typical mixed tumor of the parotid gland with pleomorphic characteristics.

than in the minor salivary glands. Formerly, a high recurrence rate following resection of this tumor existed due to inadequate resection by shelling the tumor out rather than resecting the lobe involved. This was due to incomplete encapsulation of the tumor and frequent satellite areas of the tumor. Using the principle of resection of the lobe of the gland involved with dissection of the facial nerve, recurrence should be minimal, and neurologic complications almost unknown.

Mixed tumors are frequently confused with muco-epidermoid tumors, and for this reason adequate pathologic evaluation is always necessary and frozen sections are frequently misleading. Malignant change can appear in mixed tumors with portions of them appearing as benign typical lesions, while other portions exhibit marked malignant characteristics. These are treated as malignant mixed tumors under the same criteria as applied to the muco-epidermoid or squamous cell tumors.

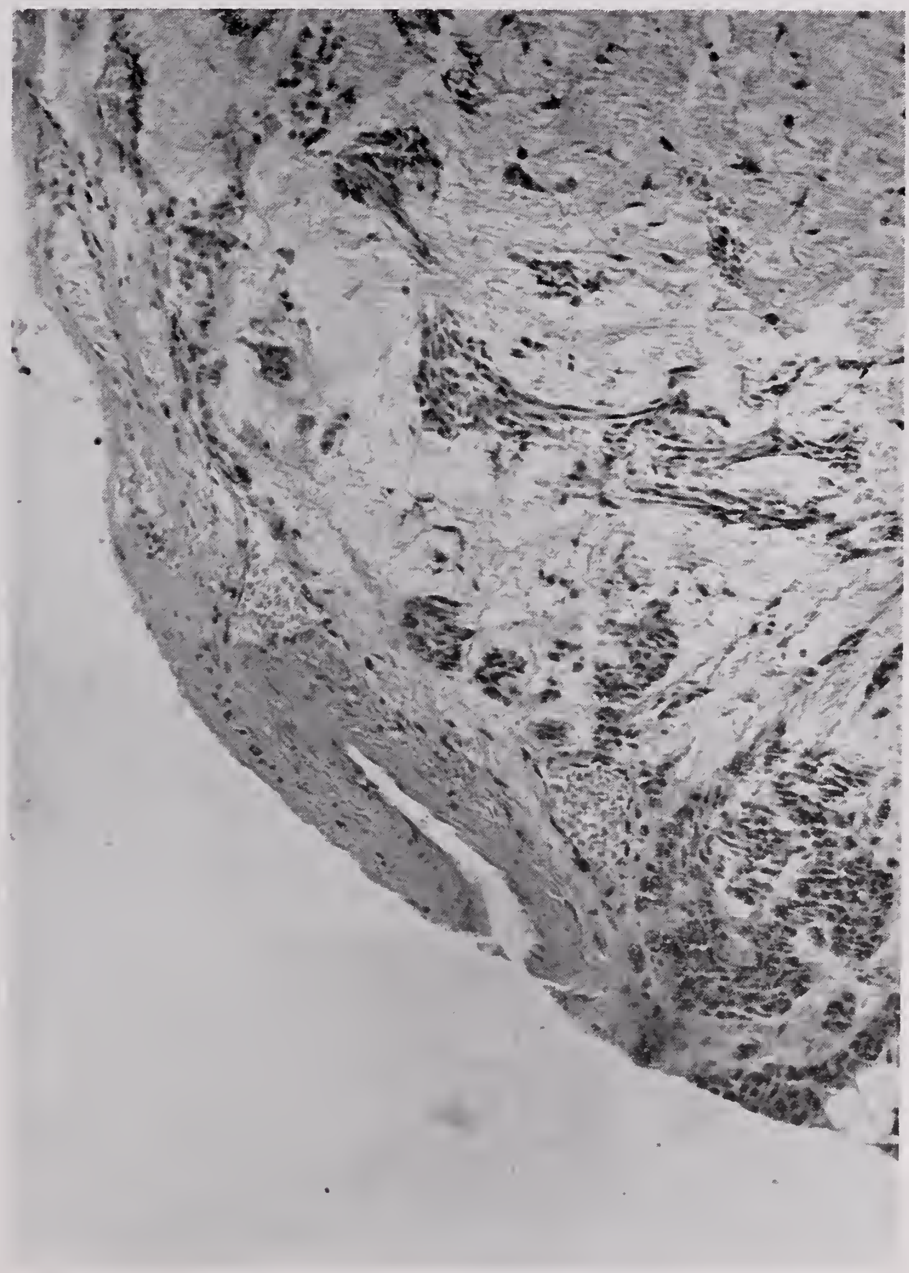

Figure 3. So-called "capsule" of a mixed tumor demonstrating its lack of complete encapsulation.

The second most common tumor of the salivary gland and the most common malignant tumor is the muco-epidermoid tumor. This accounts for approximately 5% of salivary gland tumors, and arises from the ductal epithelium with mucin containing cells present. At one time, these tumors were classified microscopically as highly malignant or of low grade malignancy. In retrospective study of large numbers of these tumors, it has been found that the microscopic classification bears no relationship to the clinical behavior of these tumors, and that while there are two distinct behavior types clinically, their behavior cannot be predicted by pathologic examination. Therefore, all muco-epidermoid carcinomas must be treated as potential lethal tumors with wide local resection including a radical neck dissection and a very close follow-up over a long period of time. We have recently performed a radical neck dissection on a patient with residual tumor present for six years following initial incomplete resection. We

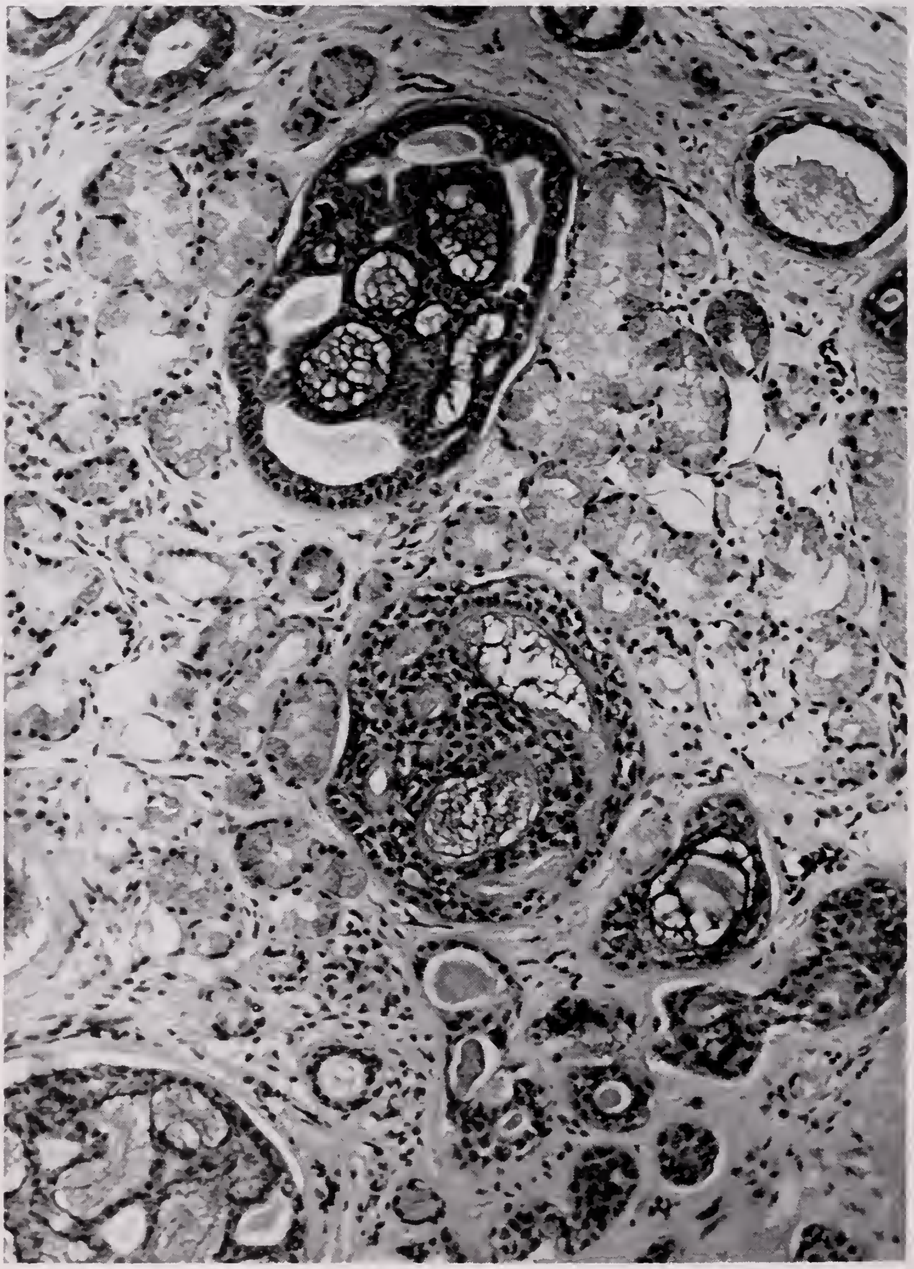

Figure 4. A muco-epidermoid tumor of the parotid that on careful review was thought to be a cylindroma, demonstrating the confusion in diagnosis often caused by these tumors.

have also seen patients with wide disseminated metastasis within a few months following initial onset of symptoms.

The adenocarcinoma exists in a number of cell types and is a complex neoplasm of the salivary glands. All of the various types of adenocarcinomas together comprise up to 7% of the salivary gland neoplasms, with no single groups accounting for more than 1½ to 2%. These include the adenocarcinomas, adenopapillary carcinoma, acinic cell carcinomas, and adenoplastic adenocarcinomas. These tumors require radical resection with radical neck dissection and constitute a very lethal type of disease.

Cylindroma of the salivary glands is also known as adenoid cystic carcinoma, adenomyo-epithelioma, or adenomatoid carcinoma. This lesion, although frequently confused with muco-epidermoid or adenocarcinomas, is characteristic in appearance and of all salivary gland tumors, has the poorest long term survival. Metastasis frequently occurs along nerve sheaths to distant areas with a long period of time, usually existing between initial symptoms and eventual demise of the patient. For this reason, the ten and twenty year survival rates are far worse when compared to the five year survival rates and with other forms of tumors even in a young age group. Very wide and radical excision including all neurologic elements should be employed with this tumor and post operative radiation therapy is frequently utilized. In general, radiation therapy has had no place in the treatment of salivary gland neoplasms with the exception of the cylindroma and squamous cell carcinoma.

Warthin's tumor is more correctly termed a papillary cystadenoma lymphomatosum. This tumor is benign, and easily excised by lobar resection with no danger of malignant degeneration and with a very low recurrence rate following adequate excision.

The squamous cell carcinoma is the last form of salivary gland tumor to be discussed and is essentially the same disease in the salivary gland as elsewhere in the head and neck. Following resection of the primary site with resection of adjacent lymphatic drainage as required, postoperative radiation is of some benefit.

A number of other tumors in the salivary glands are seen, including such things as the oxyphil cell adenoma frequently thought to be a degenerative benign process seen with aging, tumors of the lymphatic apparatus, granulomas of many types involving the gland or the adjacent lymph nodes, tumors of the vascular apparatus, tumors of the neurologic elements adjacent to the gland, or degeneration of the salivary gland masquerading as tumor such as the benign lympho-epithelial lesion.

Obstructive and bacteriologic disease of the salivary glands also may present with the initial appearance of a neoplasm. For this reason, all salivary gland disease deserves an initial diagnostic workup as we have described elsewhere. It is generally better to perform these diagnostic procedures under the direction of the surgeon who will treat the disease, if neoplasm is suspected.

In summary, a very brief review of the common forms of salivary gland disease has been presented. It is suggested that careful diagnostic evaluation of potential salivary gland neoplasm be undertaken, and that these procedures are best supplied by individuals experienced and skilled in the management of salivary gland neoplasm. Emphasis has been placed on the need for lobar dissection of the parotid gland for neoplasm and total dissection of the submaxillary gland when indicated rather than the use of incisional biopsy. For those interested in a more thorough review of this subject, a bibliography of our previous publications on this subject which includes an extensive bibliography is presented.

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Viable Organ Procurement

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PART I

I. Introduction

WORK relating to organ transplantation is proceeding along three lines of investigation: surgical techniques, procurement of viable organs, and the rejection phenomenon. The primary emphasis of this paper will deal with the various problems associated with viable organ procurement, and in particular, organ preservation techniques.

A large number of organ storage variables have been assessed.[1-10, 12-58] These include temperature, environmental pressure, environmental gaseous composition, vascular medium, surgical preparation and pretreatment, perfusion flow profiles, perfusion flow rates, storage duration and storage modes. Among the various modes of storage are schemes ranging from the very elementary to the very complex. An organ placed in an ice slurry or a pressurized vessel is an example of the former. The various extracorporeal storage techniques represent a somewhat more complex approach to this problem. Ex-vivo and cadaver maintenance schemes represent perhaps the most complex attempts of storing organs.

Vital organs have been stored in buckets, plastic bags, saline soaked sponges, rubber gloves, pressure vessels and in conjunction with living organisms. The primary emphasis has been directed toward renal preservation.[3-8, 13-40, 50, 51, 53, 56, 57] To a lesser degree, attempts at storing the heart, lungs, liver and intestine have also been reported. Two recent publications review the current state of the art.[1, 2]

II. Techniques of Organ Preservation

1. In-vitro

In-vitro storage is the technique most often employed in organ preservation studies.[3, 9, 13-44, 46-53, 55, 58] Perfusion (either continuous or intermittent) is being utilized in more recent studies. Hypothermia, when included in the experimental plan, is achieved by incorporating a heat exchanger into the system or by housing the entire system in a refrigerator. Oxygen, carbon dioxide, and other gas levels in solution are maintained using membrane oxygenators.

Hyperbaria is also employed in many studies in an attempt to extend the range of storage duration. Commercially-available or custom-built pressure vessels are used for these studies. More often than not, physiological variables (weight gain, flow rates, perfusion pressures) rather than biochemical variables in combination with the former are used to assess organ viability after storage is terminated. Rarely are online biochemical organ assessments utilized to assess the quality organ storage. In some schemes, such assessments are not physically possible. Typically, "successful" organ preservation durations range between 8 and 72 hours utilizing extracorporeal methods.

2. Ex-vivo Perfusion

Ex-vivo perfusion employs a "normal" organism to perfuse and, hence, maintain the stored organ outside the host's body.[4, 5] This type of storage provides the stored organ with an almost "normal" physiological environment. The organ is usually housed in a relatively simple container; and, perfusion is achieved through vascular connections made at appropriate cannulation sites.

Perhaps the most successful organ storage scheme was achieved using ex-vivo perfusion.[4] A donor kidney, mounted in a chamber and positioned on the forearm of an anephretic male was capable of providing good renal function for approximately 27 days. Previously the patient was being maintained by dialysis; and, rejection drugs were employed during the study. A ureter cannula enabled urine flow. The host benefitted from the functioning stored organ.

Another example of this technique employed short-term perfusion (4-6 hours) of the heart by cannulation to the cartoid artery and jugular vein.[5] A number of other organs have been stored in this manner, each employing an animal to provide both the perfusion and perfusion medium.

3. Intermediate Host

Another type of organ storage employs the principle of an intermediate host.[5, 6, 57] An organ is implanted into an otherwise intact animal; and, some immulogical suppressive techniques employed to maintain the organ. Typically, a heterologous host is employed. In one study, primate kidneys function in human subjects for up to 7 months; and the host relied on this kidney for renal function.[57]

In another study, total body lethal radiation was employed to suppress the rejection mechanism. This resulted in the death of the host organism within approximately ten days; however, the latter provided a good environment for the stored organ. By this technique, termed xenobanking, Rhesus monkey kidneys were stored in baboons.[6]

4. Whole Body Storage

Circulatory support by mechanical cardiac massage, artificial respiration, and various other physical devices have been employed to maintain the respiration and circulation of cadavers for up to ten days.[59] A mechanical massage system has maintained the circulation of dogs with induced ventricular fibrillation[8] for up to 24 hours. Other approaches to maintain or support the circulation employ whole body pressurization[11] (alternate compression and decompression) and counterpulsation.[12] Although still in the experimental stages, these methods can in theory be applied to whole body storage.

5. Freezing

Organ freezing is currently being examined due to past success with blood and skin preservation coupled with the apparent simplicity of any resulting storage system.[10, 54, 56, 59] Various temperature patterns, perfusate additives and techniques for achieving low temperatures have been investigated. The results are generally poor, currently offering little possibility for long-term storage.

6. Autoperfusion

"Autoperfusion" involves the reconstruction of an organ - organ system outside the body.[46] The two basic components are the heart and the lungs. This two organ system was apparently successful for approximately 17 hours. It is interesting to speculate what effect adding other vital organs (kidney, liver, intestine) would have.

III. Discussion (Organ Storage Techniques)

Complex in-vitro preservation techniques have not significantly increased organ storage durations relative to the most elementary schemes (organ in ice slurry or pressure vessel). Although this approach may provide techniques for very short-term storage (a few days at the most), other approaches appear more promising for long-term storage. Long-term storage will probably be defined as somewhere near 21 days, the duration of blood storage.[59]

The successes in the limited number of ex-vivo and intermediate host studies reported seem to indicate that physiological conditions provide one suitable environment for storing organs. This conclusion should naturally surprise no one. The primary problems resulting from application of this approach are logistical if animals are used, and ethical if humans are used as storage systems. Long - term problems associated with continued use of rejection drugs are currently being documented by several research groups.[59]

Intermediate host techniques for long-term organ storage offer a good trade-off as among logistical, medical and ethical problems. Although this concept is not currently very popular, it should be considered strongly for its potential in providing viable organs.

Whole body storage, using mechanical support to maintain respiration and the circulation, offers another sound technique for organ preservation. Storage for up to ten days or more is possible, however, utilization of this technique requires a more acceptable criterion of death (or life). If an adequate definition were available, then whole body storage would be a satisfactory technique for storing viable organs.

The two other techniques of organ storage, autoperfusion and freezing, do not presently offer much possibility for long-term storage. No other techniques were reported in the literature examined.

IV. Viable Organ Procurement

The number of researchers and amount of funding being devoted to this effort would indicate a potential wide scale application of organ storage (as it relates to organ transplantation). There are only several dozen institutions in this country where transplantation might be done routinely. Ideally, the organ storage centers would be located close to the site of utilization.

The complex flow of materials and personnel involved in viable organ procurement has yet to be rigorously assessed from an economic, social and technical point of view. For example, a critically injured accident patient might be a potential organ donor. His family would have to be approached, the situation explained to them, and a decision rendered. They might in turn request opportunity to seek out their family physician or clergyman for advice before making a decision. The decision would naturally apply only upon death of the victim. Our present definition of death is so unsatisfactory, that lawyers and physicians are looking to each other for one that is more useful.

This uncertainty might place the family or attending physician in a dilemma. A determination of death might be disputed, as between the attending physician and, for example, a neurologist.

If permission were obtained to enable organ removal (or harvesting), rapid transport of the surgical team to the victim or vice versa is necessary. The smaller hospitals are usually not equipped to facilitate such a removal. Surgical removal would probably be done in the organ storage center; and, specially trained personnel and equipment would be required to retrieve the donor organ.

Organ removal tissue typing and organ assessment precede the decision to store, transplant, or discard the various vital organs. Tissue typing presently requires sending blood samples to Los Angeles, since the eight or so regional tissue typing centers do not meet the standards established by Dr. Paul Terasaki of that city.

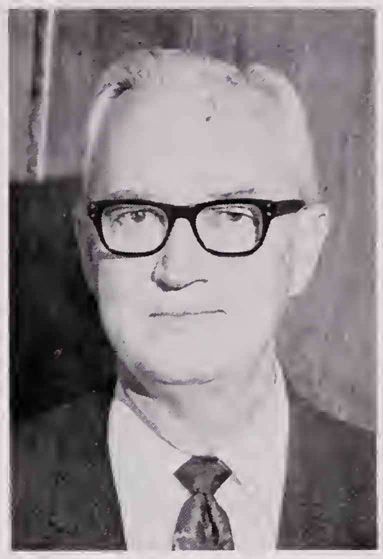
If transplantation is indicated, then the candidate's health and travel time to the transplantation center become important factors. A significant delay between organ removal and transplantation is undesirable, the delay being limited by the maximum allowable duration of organ storage. The renal transplant candidate can presently be maintained in good health at the transplant center if placed on artificial dialysis.

Record keeping, surgical and technical personnel, hospital space, supporting equipment and facilities and human factors must also be considered. No one has seriously questioned whether we can meet this potential demand and still attend to the existing load on the medical care system!

Approximately six regional (and independent) organ procurement centers are currently being funded. Valuable information relating to the feasibility of providing wide-scale viable organ procurement, and hence wide-scale transplantation, should be available in the near future.

No Vacation for a Doctor

PRESIDENT'S PAGE



Hopefully, next month I shall have survived being your president-elect and president for the past 24 months. Headaches, dizziness, blurring vision, frustration, and insomnia caused me to visit my personal physician who advised me to take a vacation in a warm, sunny climate. A moderate case of nonfamilial hypertension had developed. My wife Vi and I decided to spend a week in Brownville, Texas, only to get stranded in a truck-stop "sleep and eat" cafe-motel at Eldorado, Kansas. It is warm and dry, but totally isolated. Radio reports indicate many are more unfortunate than we are. Historically, this may well become "the blizzard of the Mid-West in 1971."

As your president on vacation, "the only thing left undone" was my president's last letter for the State Journal. Fortunately, I had taken all the research material along, but anticipated writing it on the sunny beaches of the Gulf of Mexico, instead of a truck stop under blizzard conditions in Eldorado, Kansas.

During the past year, your State Association has attempted to follow the objectives of the AMA, identified as . . .

(1) *Acute shortage of health manpower*—Due to increased demand for health care, an imbalance between supply and demand has developed. The State Medical Association is striving to increase medical service in rural Nebraska by increasing out-state family practice residencies, increasing admissions to medical and nursing schools, and encouraging graduates to remain in our state. The budget presented to the state legislature by our Governor this session, which decreases the budget to our medical center, fails to meet these increased demands. A teaching, university hospital can not be expected to be 90 percent self-sufficient. This will not increase manpower availability in our state. The members of the N.S.M.A. should so inform their respective state legislators.

(2) *Rising health care costs* — Hospital medical staffs are reviewing and studying items of hospital costs which can be removed and provided by other means. Physicians are shortening acute hospital stay by early transfer of patients to less expensive extended care and home health services. Utilization review committees are checking for efficient usage of diagnostic x-ray and laboratory procedures.

(3) *Financing health care* — Many programs were studied in the last Congress. New proposals by President Nixon and our state legislature are being reviewed. It appears that the AMA's reaction "to the President's health proposal is generally favorable." The administration plans to recommend some kind of regulation over the insurance industry, but didn't propose, or apparently plan to propose, regulation of physician's fees.

The Nebraska Legislature unequivocally has adopted a resolution 38-3, urging Congress "give constructive consideration immediately" to assumption of all costs of various welfare programs. Not having all the facts or understanding the potential ramifications, your Association will study the issue and take an announced position later.

(4) *Mental health* — Development of community mental health centers in co-operation with metropolitan mental health administrators and other experts is being developed in

Nebraska. More efficient methods of treatment and rehabilitation allow quicker return to productive work by patients.

Areas of *pollution, alcoholism, malnutrition*, and *health care of slum residents* are in need of study and development in our state. These will be considered as they are developed in sequence of their priority.

An attempt to improve the operating efficiency of our State Association is being augmented. The N.S.M.A. is coordinating and unifying its committee concept by reducing the present 30 standing committees to a smaller, more workable number. A few committees with broader representation could decrease the total number of meetings and accomplish a more inclusive net result for less money.

A recent membership survey carried out by the Public Relations Committee revealed that the N.S.M.A. Journal rated fourth in popularity; Medical Economics was first. The Board of Trustees has adopted the concept that the Journal should become a more self-sustaining document. The printed material, consequently, will be reduced in volume to financially equate the diminishing income received from our advertisers. No decrease in quality is anticipated, while producing a financially sound publication.

The N.S.M.A. Membership *Bulletin* (pink sheet) is also to be redesigned to achieve the ultimate in readability and effectiveness as a direct communicative link between the Association and the member.

A special "THANK YOU" is in order to all who, in the opinion survey, support the Association's over-all program and believe it should be strengthened. Your new incoming president, Dr. Roger Mason, will provide youth, vigor and enthusiasm for an on-going program.

I wish also to express a personal "thank you" to my wife Vi, and the office staff, officers and committees for their support during the past year. The projected activities co-ordinated with present events will produce a strengthened, efficient program but economizing measures will not completely offset the increased cost of expanded public relations activities. An increase in annual dues for N.S.M.A. membership is inevitable. Remember the old Chinese proverb — "We plant trees today so that others may have shade tomorrow."

—C. R. Brott, M.D.

WashingtoNotes

Medicredit

The American Medical Association's 1971 Medicredit national health insurance program was introduced in both chambers of the congress with more than 100 Democratic and Republican sponsors.

There are two major differences between this Medicredit legislation and the bill introduced last year. Catastrophic coverage has been added, and the peer review provision dropped because Congress is expected to approve such a program before considering national health insurance.

Medicredit would:

(1) pay the full cost of health insurance for those too poor to buy their own,

(2) help those who can afford to pay a part of their health insurance premium. The less they can afford to pay, the more the government would help out,

(3) see to it that no American would have to bankrupt himself because of a long-lasting, catastrophic illness.

The **government** would pay all of the premium for low-income beneficiaries — an individual and his dependents without any income tax liability. For others, the government would provide scaled participation ranging between 97.5 percent and 10 percent, favoring lower-income persons, in the payment of premiums for basic coverage. It would pay in full the premium for catastrophic expense coverage, but there would be a "financial corridor" based on income before such coverage would begin.

A **beneficiary** eligible for full payment of premium by the federal government would be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Eligible beneficiaries with whom the government would be sharing the cost of premium could elect between a credit against income tax or a certificate.

To participate in the Medicredit program, a **carrier** would have to qualify under state law, provide certain basic coverage, make coverage available without pre-existing health conditions, and guarantee annual renewal.

A qualified **policy** would offer comprehensive insurance against the ordinary and catastrophic expenses of illness. Basic benefits in a 12-month policy period would include 60 days of inpatient care in a hospital or 120 days in an extended care facility. Other basic benefits would provide emergency and outpatient services and all medical services provided by doctors of medicine or osteopathy. The catastrophic expense protection would pay incurred expenses for benefits in excess of the basic coverage, including hospital, extended care facility, inpatient drugs, blood, prosthetic appliances, and other specified services.

Under the **basic coverage**, there would be a deductible of $50 per hospital stay, and 20 percent coinsurance of the first $500 of medical expense and on the first $500 of emergency or outpatient expenses. Under the catastrophic illness provisions, the amount of the "financial corridor" would be based on taxable income: 10 percent on the first $4,000, 15 percent on the next $3,000, and 20 percent thereafter.

The Administration program includes a National Health Insurance Standards Act which would require employers to provide basic health coverage for their employees. The minimum benefits would include hospital and physician care, full maternity care, well-baby care, laboratory expenses and certain other expenses. There would be certain deductible and coinsurance.

The minimum program would also provide at least $50,000 in coverage for each family against the costs of catastrophic illness. Under this program employees could elect to be enrolled in a Health Maintenance Organization rather than receive the basic coverage through private carriers. The program would be paid for by the employer, 65 percent for the first two and one half years, 75 percent thereafter, and the employee, 35 percent and 25 percent. There would be no cost to the federal government.

A second Administration proposal would provide a Family Health Insurance Plan to replace medicaid for poor families. The program would be financed and administered by the federal government. It would provide health insurance to all poor families with children headed by self-employed or unemployed persons whose income is below a certain level, $5,000 for a family of four. The program would pay all medical costs for families with income below a certain level, $3,000 for a family of four. As income increases, the family would begin to pay part of the costs through a graduated schedule of premiums, deductibles, and coinsurance.

Down Memory Lane

1. Tincture of digitalis as dispensed shows a marked variation in its strength.

2. It looks so easy to see him do a version, and there is such a demand for the shortening of labor and relief of suffering among well-to-do women, that one might think "Why, I can do that." I'll go straight home and make myself wealthy and famous at once by doing elective versions."

3. At this time, when women are represented in practically every occupation listed in the census (telegraph and telephone linemen, and members of the army and navy being the only exceptions), public health nursing is easily one of the half dozen occupations offering the greatest opportunity for the exercise of women's distinctive tastes and talents, developed through agelong experience.

4. A bill before the legislature provides that chairs of Homeopathic and Eclectic Medicine be added to the curriculum of the University College of Medicine at Omaha.

5. Country doctors are finding it difficult to get hold of enough cash to pay the chauffeur, and the gasoline and repair bills, these days. Forty cent corn is to blame.

6. Three hundred ninety-three medical men registered at the clinical meeting of the Nebraska Section of the American College of Surgeons at Omaha the first days of March.

7. The enormous costs and outlays of modern hospitals cannot be met by casual financing.

8. Has obstetrics ceased to be an art? Has delivery been reduced to a science? Shall we go after a child as we would a tumor?

9. The next morning, June 28th, after having been packed in ice all night the abdomen was rigid especially in the umbilical region.

Nebraska State Medical Journal
April, 1921

Coming Meetings

CRIPPLED CHILDREN'S CLINIC—
April 3 — Central High School, Alliance.
April 17 — Elementary Grade School, Ainsworth.
May 22 — Elks Lodge, North Platte.

NEBRASKA SOCIETY OF RADIOLOGIC TECHNOLOGISTS — 1971 Annual Convention; April 16 and 17, 1971; Villager Motel, Lincoln, Nebraska. Write to: Mrs. Nancy Savery, R.T., Orthopedic and Fractrue Clinic, 2300 So. 13th St., Lincoln.

SOUTHWESTERN SURGICAL CONGRESS, 23rd Annual Meeting — April 19-22, 1971; Caesar's Palace Hotel, Las Vegas, Nevada. Write to: Jack A. Barney, M.D., Secretary-Treasurer, Southwestern Surgical Congress, 301 Pasteur Building, Oklahoma City, Oklahoma 73103.

NEBRASKA STATE MEDICAL ASSOCIATION — 103rd Annual Session, April 25-28, 1971, Omaha Hilton Hotel, Omaha, Nebraska.

NATIONAL ASSOCIATION OF UNDERWATER INSTRUCTORS — May 1-8, 1971; Underwater Explorers Club, Freeport, Grand Bahama; prerequisite: practicing physician. Write to: NAUI Hgtrs, 22809 Barton Road, Grand Terrace (Colton), Ca. 92324. Phone (714) 783-1862.

THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS — The Nineteenth Annual Clinical Meeting of The American College of Obstetricians and Gynecologists will be held in San Francisco, May 3-6, 1971. Contact: Donald F. Richardson, 79 West Monroe Street, Chicago, Illinois 60603.

NEBRASKA ASS'N OF MEDICAL ASSISTANTS — Fifth annual convention and educational seminar; May 14, 15 and 16, 1971; Villager Motel, Lincoln.

SYMPOSIUM ON GENETIC COUNSELING presented by Childrens Memorial Hospital, June 16, 1971; sponsored by the National Foundation — March of Dimes; at the Sheraton Chicago Hotel, Chicago, from 8:30 a.m. to 5:00 p.m. Write to: The National Foundation — March of Dimes, 173 West Madison St., Chicago, Illinois 60602.

AMERICAN MEDICAL ASSOCIATION — Annual Convention, Atlantic City, New Jersey, June 20-24, 1971.

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting, House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28 - December 1, 1971.

Welcome New Members

Jerry A. Adler, M.D.
Crete, Nebraska 68333

John R. Allely, M.D.
10633 Martha Street
Omaha, Nebraska 68124

Jackson J. Bence, M.D.
710 West Koenig, Box 1527
Grand Island, Nebraska 68801

Paul Bottom, M.D.
Grant, Nebraska 68140

Lewis J. Fisher, M.D.
3610 Dodge Street
Omaha, Nebraska 68131

Margaret E. Faithe, M.D.
University Hospital
42nd and Dewey Avenue
Omaha, Nebraska 68105

C. Thomas Frank, M.D.
800 Doctors Building
Omaha, Nebraska 68131

John D. Griffiths, M.D.
8601 West Dodge Road, #210
Omaha, Nebraska 68114

David M. Holloway, M.D.
Western Electric Company
120th and "I" Street
Omaha, Nebraska 68107

L. A. McKinnis, M.D.
Mary Lanning Hospital
Hastings, Nebraska 68901

Paul Plessman, M.D.
Seward, Nebraska 68434

Kenneth E. Pletcher, M.D.
505 Martin Drive
Bellevue, Nebraska 68005

John T. Ramsell, M.D.
234 Doctors Building
Omaha, Nebraska 68131

Jose A. Saporta, M.D.
2602 "J" Street
Omaha, Nebraska 68107

James J. Shehan, M.D.
119 North 51st Street
Omaha, Nebraska 68132

Joseph C. Shipp, M.D.
Department of Medicine
Uni. of Nebr. College of Medicine
42nd and Dewey Avenue
Omaha, Nebraska 68105

Shih-Doh-Wu, M.D.
St. Joseph's Hospital
2305 South 10th Street
Omaha, Nebraska 68108

Thomas R. Tibbels, M.D.
West Point, Nebraska 68788

Our Medical Schools

Art and medicine

A painting at the University of Nebraska Medical Center recalls one of the most ancient concepts of medicine, the Indian medicine man.

The painting depicts the medicine man performing his rituals inside a tepee. His patient is resting on a buffalo robe with a willow-framed back rest held up by a tripod of wooden poles.

The medicine man is fanning the cedar smoke with an eagle wing in his right hand. In his left hand he is shaking a gourd rattle to keep the evil spirits out of the tepee.

Other tools of the medicine man's trade are seen in the tepee: Two forked sticks holding a skull of an eagle suspended on a long stick, symbolizing the presence of the sacred bird; a sacred bundle of "eagle medicine," made of an otter skin and containing many parts of the eagle, such as heart, brains, tallons; and a parfleches case, a rawhide case used for packing in horse transportation.

Dr. Leon S. McGoogan commissioned North Platte artist Ted Long to do the oil painting. The actual mechanics of painting the picture took about two and one-half months, but Mr. Long said that his month-long research included living with the Ogallala-Sioux Indians at Pine Ridge, South Dakota. Working in his native North Platte, Mr. Long has earned nation-wide fame for his paintings of the West and frontier life.

The new painting was presented to the Medical Center February 25 by Dr. McGoogan, senior consultant in obstetrics and gynecology. It will be placed near another piece of art, a mural of the molecule DNA, now being finished by Bill Hammon. Both are on the main floor of the Medical Center's library.

Multiple sclerosis

Dr. Wayne L. Ryan, research professor of obstetrics at the University of Nebraska Medical Center, is investigating food allergy as a possible cause of multiple sclerosis.

Myelin protein has produced experimental allergic encephalomyelitis (EAE) in laboratory animals. EAE is produced by injecting laboratory animals with brain tissue or the basic protein of the brain.

Dr. Ryan will attempt to introduce brain tissue into the bodies of these animals by mixing fresh brain or spinal cord tissue with the animals' regular food, by administering purified basic protein by a stomach tube or by infusing these materials into the small intestines of the animals. The allergic response to certain foods is the result of the absorption by body cells of molecules of the allergen that has not been completely broken down in the digestive system.

Postgraduate courses

The University of Nebraska Medical Center has scheduled four postgraduate courses for May, 1971.

1. On May 3 and 4 the Medical Center will present a seminar on energy metabolism and the regulation of metabolic processes in mitochondria.

Sessions will be in the Storz Pavilion of Clarkson Hospital, adjacent to the Medical Center campus in Omaha. Registration fee is $15.

2. For the first time the department of continuing education will offer a course on oral surgery. The sessions May 13 and 14 will be in the amphitheater of University Hospital.

Participants may attend one or both days. The fee for one day is $40 and for two days, $60.

3. The sixteenth annual Trauma Day will be held on May 14 and 15. This year's sessions will be devoted to trauma in the farm, home and industry.

Sessions will be held in the Storz Pavilion of Clarkson Hospital. Registration fee is $40. The course carries nine hours of credit with the American Academy of General Practice.

4. The University of Nebraska Medical Center is co-sponsor, along with other schools in the Big Eight, of a symposium on otorhinolaryngology for non-otorhinolaryngologists on May 17 through 20 at Fountainhead State Lodge, Lake Eufaula, Oklahoma.

Enrollment for the course is $100. Partial enrollment for one, two or three days is accepted at fees of $50, $80 and $90 respectively.

Attendance at the course is acceptable for 15 hours of credit with the AAGP.

"Cancer and you"

"Cancer and You" a recently published book written by 12 doctors, most of whom are faculty members of the Creighton University School of Medicine, is designed to inform the average citizen of the symptoms and treatments of cancer as well as current information concerning the cause of the disease.

Edited by Dr. Henry T. Lynch, professor of preventive medicine and public health and chairman of the department, the work contains 20 chapters covering the prevention and early detection of cancer, cancer and genetics, leukemia and blood malignancies, kinds of tumors, and other aspects of the disease.

"Cancer and You," which took two years to compile, is fully illustrated and is published by the Charles C. Thomas Company of Springfield, Ill. The cost of the 316 page work is $16.50.

Telephone conference

The University of Nebraska Medical Center will make its networks for telephone conference calls available to a larger number of hospitals.

Last month Robert Moutrie, director of continuing education at the Medical Center, sent invitations to hospitals in Nebraska, Wyoming, northern Kansas, eastern Colorado, western Iowa and southern South Dakota to join one or both of the networks. One network is for physicians and the other for nurses.

The two-way telephone conference is broadcast via regular long distance telephone lines. It starts with a didactic presentation by a specialist in his field supplemented with appropriate slides and printed materials. The time remaining in the hour is devoted to questions from the participants along the network.

Before each program the Medical Center mails each hospital a packet containing a set of slides for projection during the conference and handout material for each participant consisting of a biographical sketch on each speaker and an outline of the conference.

Each program for physicians carries one hour of credit with the American Academy of Family Practice.

Topics in the past have included for physicians birth control pills, anesthesia, gout, emergency care of burns, pharmacology of diabetes, neurological screening examination, hypertension, and eye trauma.

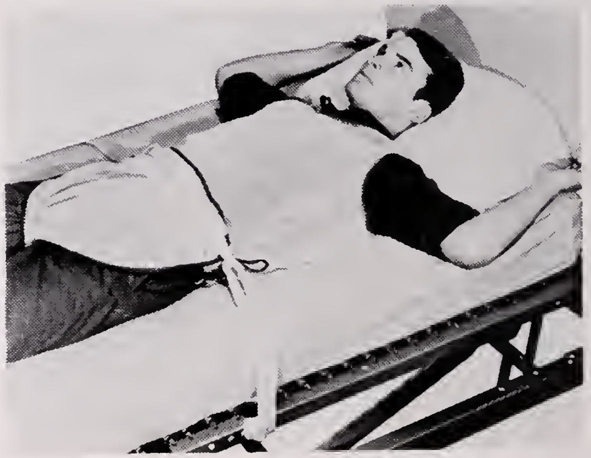
It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precautions, and side effects.

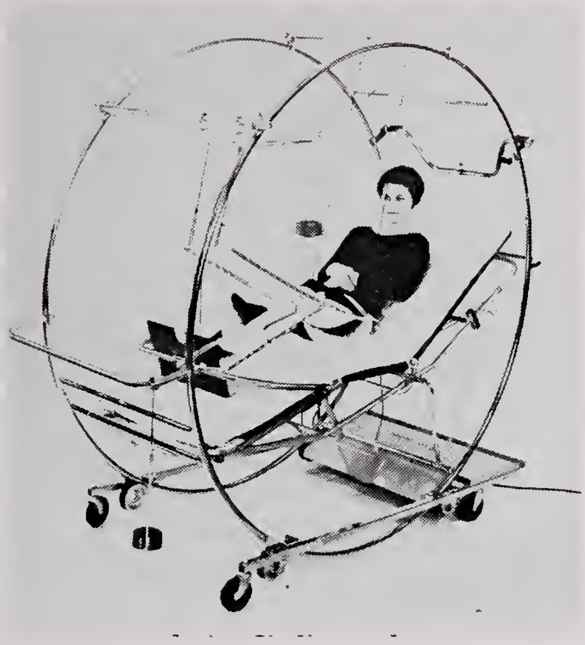
The Journal assumes no responsibility for drugs and other products listed here.

Security suit for children

The Posey Company has developed a new pediatric model of their Houdini Security Suit for children. This remarkable new type of security garment provides the child with safety and comfort, yet is designed so that he may not remove it. The vest and lower portion of the garment are interlocked by the waist belt, which ties out of the patient's reach. If desired, the vest can be worn alone.



The Posey Pediatric Houdini Security Suit is available in cotton flannel and new Breezeline material: both completely washable. There are four sizes: infant, to 2 years; small, 3 to 4 years; medium, 4 to 6 years; and large, 6 to 8 years. The Posey Pediatric Houdini, #5163-4932 is priced at $9.90. Vest #4930 only $6.90. Inquiries and orders regarding this item should be directed to your nearest local hospital equipment dealer, or to the Posey Company, 39 South Santa Anita Avenue, Pasadena, California 91107.



CircOlectric bed

An improved Stryker CircOlectric Bed for immobilized patients has been introduced. The new footboard is adjustable to exactly fit the patient regardless of height. The footboard adjusts for patient comfort in either the lying or sitting position. The support provided by this footboard prevents footdrop, permits patient to step out of the bed when bed is in semi-vertical position. A new adjustable cross-bar brings the anterior frame snugly against the patient regardless of whether the patient is thin or obese. Finally, the CircOlectric Bed siderails now permit 16° angulation or flat positioning.

For information describing this improved bed, write: Stryker Corporation, 420 Alcott Street, Kalamazoo, Michigan 49001.

Acetaminophen: Squibb

Squibb introduces the "action without aspirin reaction" principle of pain relief with Valadol®, its form of acetaminophen.

Like aspirin, this valid alternative temporarily relieves minor pain, reduces fever and is comparable to aspirin in effectiveness for many indications such as simple headache, flu pain, toothache and low back pain in adults. Side effects, however, such as gastric irritation, heartburn, and nausea accompanying aspirin therapy have been reported less frequently with acetaminophen.

G.I. (gastrointestinal) bleeding due to aspirin (although the significance of the amount of blood lost is not established) is not uncommon, and, in certain rare instances, may be severe, particularly in ulcer patients. With acetaminophen (Valadol), the frequency and amount of blood loss reported are far less common.

The three forms are: Valadol Liquid for younger children — a pleasant-tasting, fruit-flavored elixir that is supplied with the unique Flexidose® Spoon. The calibrated tube-spoon (½, 1 and 2 teaspoons) assures accurate measurement and prevents spilling. The liquid is available in bottles of 2 and 4 ounces (2 gr. per 5 cc.).

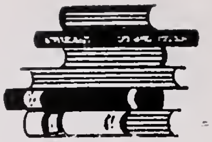
Valadol Chewable Tablets for older children — the first chewable tablet of its kind — in a pleasant-tasting fruit flavor. It is available in bottles of 24 and 90 (2 gr.).

Valadol Tablets for adults. Available in bottles of 24 and 100 (5 gr.).

Tetracycline: PD.

Parke, Davis & Company has announced its first move into the tetracycline hydrochloride field with the introduction to its product line of Cyclopar Capsules, 250 mg.

Books



Handbook of Pediatrics, by H. K. Silver, C. H. Kempe, and H. B. Bruyn. Published 1971 by Lange Medical Publications, Los Altos, California. 713 pages (4¼″ x 7″), $6.50.

The Handbook first appeared in 1955; it is now in its ninth edition and has been printed in six languages. Doctors Silver and Kempe are professors at the University of Colorado School of Medicine; Doctor Bryn is professor at the University of California School of Medicine. There are 32 chapters and a 65 page appendix. The cover is soft but durable.

When I was very young, a textbook had four hundred pages, and a synopsis or handbook or primer only one fourth as many. Books, authors, and editors give up their pristine slimness as the years go by. Perhaps there is much more to know, but a 713 page handbook, and the authors say it is not to be used as a substitute for more complete texts and reference works, is thought-provoking. Still, it is truly a house officer's **vade-mecum**; it is only an inch thick and will fit into his white-coat pocket. It is useful for the student, intern and resident, for the examination taker, the brusher-upper, for the adult nonpediatrician, and for the expert.

—F.C.

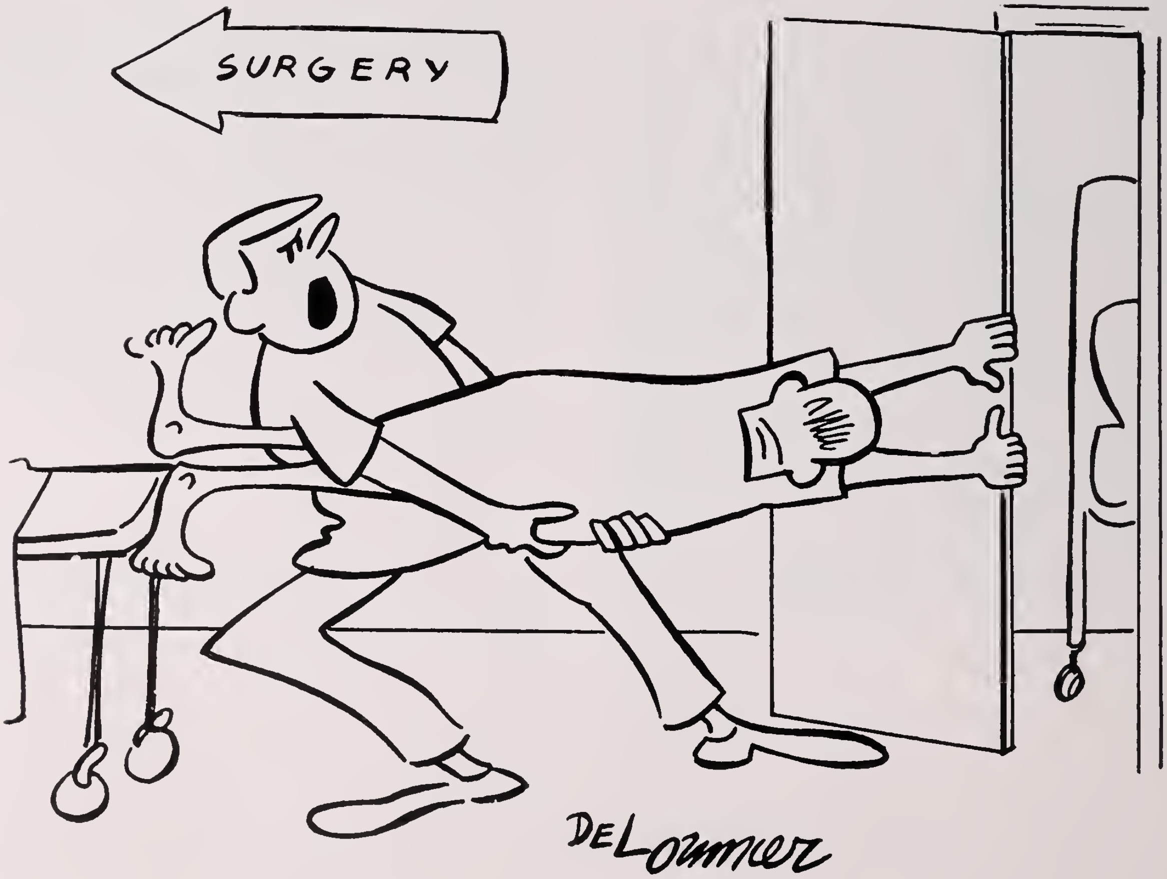
Emergency Care and Transportation of the Sick and Injured; Committee on Injuries, American Academy of Orthopaedic Surgeons. Printed 1971 by George Banta Co., Inc., Manasha, Wisconsin. 293 pages (7¼″ by 10⅛″), divided into 58 short chapters. There are 84 contributors, representing medicine, law, and the police.

"The emergency medical technician performs a unique service which cannot be rendered by any other individual or group." This book is written for him. The chapters deal with anatomy, apnea, shock, resuscitation, stroke, diabetes, radiation, burns, airway obstruction, cardiac arrest, heart attack, childbirth, the ambulance, transportation, and many other topics, including coma, seizures, snakebite, and bleeding.

The index is good. The text is readable and is accompanied by many excellent drawings and photographs. A "selected list of supplementary reading" is added.

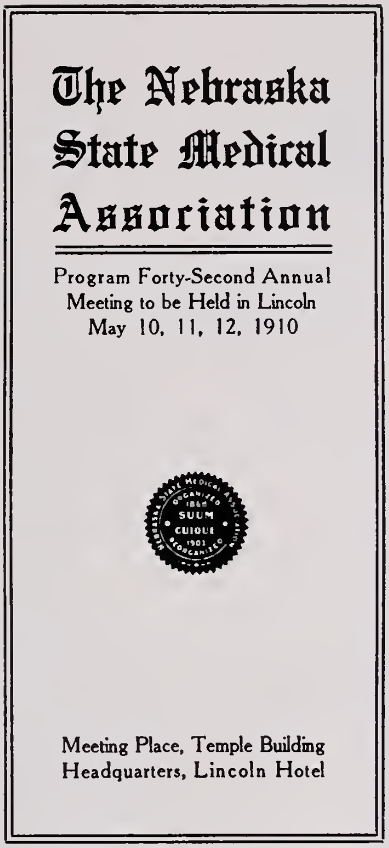
This book will save lives. It is worth its weight in gold, whatever that may be.

—F.C.



"You're not relaxing, Mr. Gumberg."

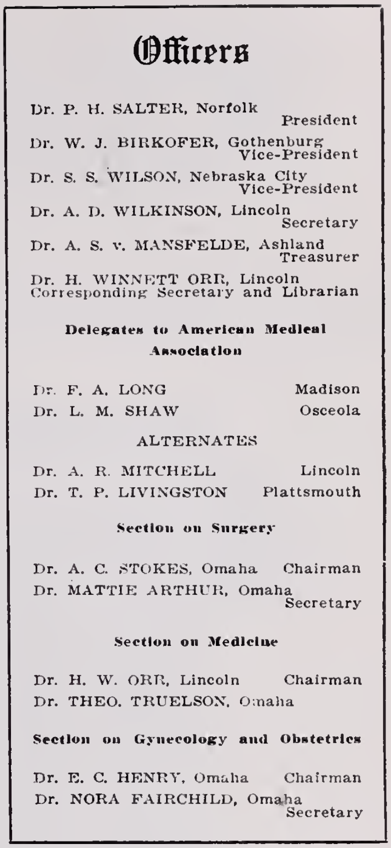
Picture Gallery



The Nebraska State Medical Association

Program Forty-Second Annual
Meeting to be Held in Lincoln
May 10, 11, 12, 1910

Meeting Place, Temple Building
Headquarters, Lincoln Hotel



Officers

Dr. P. H. SALTER, Norfolk	President
Dr. W. J. BIRKOFER, Gothenburg	Vice-President
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Dr. A. D. WILKINSON, Lincoln	Secretary
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Dr. F. A. LONG	Madison
Dr. L. M. SHAW	Osceola

ALTERNATES

Dr. A. R. MITCHELL	Lincoln
Dr. T. P. LIVINGSTON	Plattsmouth

Section on Surgery

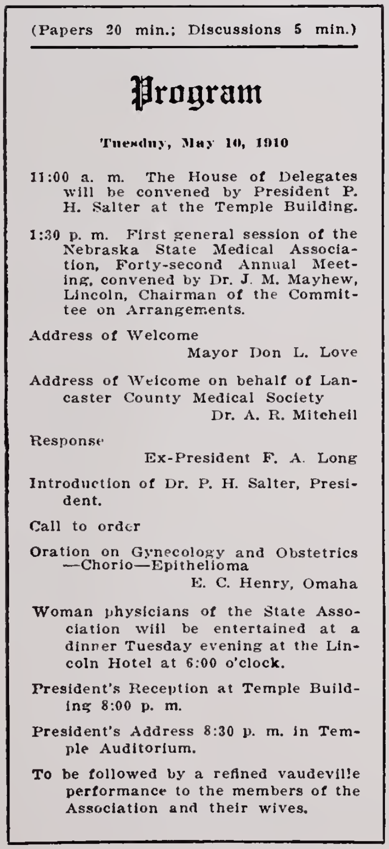
Dr. A. C. STOKES, Omaha	Chairman
Dr. MATTIE ARTHUR, Omaha	Secretary

Section on Medicine

Dr. H. W. ORR, Lincoln	Chairman
Dr. THEO. TRUELSON, Omaha	

Section on Gynecology and Obstetrics

Dr. E. C. HENRY, Omaha	Chairman
Dr. NORA FAIRCHILD, Omaha	Secretary



(Papers 20 min.; Discussions 5 min.)

Program

Tuesday, May 10, 1910

11:00 a. m. The House of Delegates will be convened by President P. H. Salter at the Temple Building.

1:30 p. m. First general session of the Nebraska State Medical Association, Forty-second Annual Meeting, convened by Dr. J. M. Mayhew, Lincoln, Chairman of the Committee on Arrangements.

Address of Welcome
Mayor Don L. Love

Address of Welcome on behalf of Lancaster County Medical Society
Dr. A. R. Mitchell

Response
Ex-President F. A. Long

Introduction of Dr. P. H. Salter, President.

Call to order

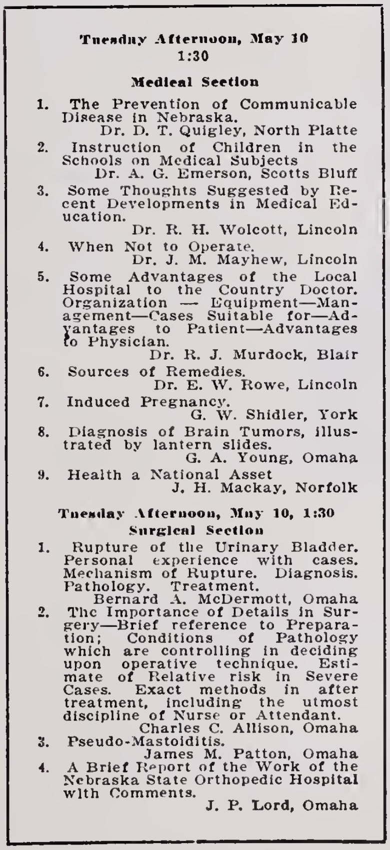
Oration on Gynecology and Obstetrics —Chorio—Epithelioma
E. C. Henry, Omaha

Woman physicians of the State Association will be entertained at a dinner Tuesday evening at the Lincoln Hotel at 6:00 o'clock.

President's Reception at Temple Building 8:00 p. m.

President's Address 8:30 p. m. in Temple Auditorium.

To be followed by a refined vaudeville performance to the members of the Association and their wives.



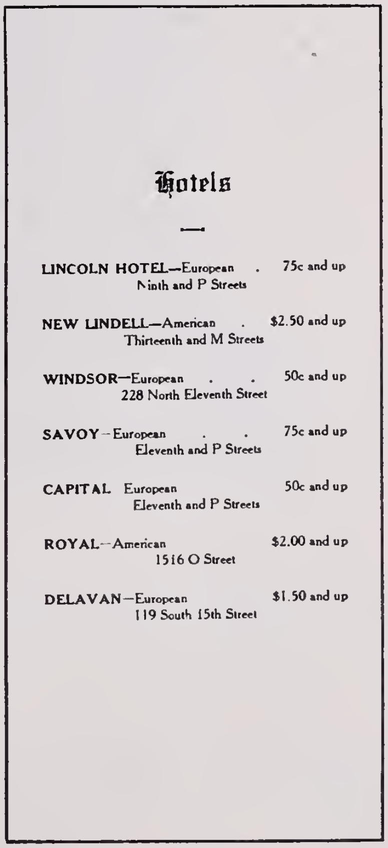
Tuesday Afternoon, May 10
1:30

Medical Section

1. The Prevention of Communicable Disease in Nebraska.
   Dr. D. T. Quigley, North Platte
2. Instruction of Children in the Schools on Medical Subjects
   Dr. A. G. Emerson, Scotts Bluff
3. Some Thoughts Suggested by Recent Developments in Medical Education.
   Dr. R. H. Wolcott, Lincoln
4. When Not to Operate.
   Dr. J. M. Mayhew, Lincoln
5. Some Advantages of the Local Hospital to the Country Doctor. Organization — Equipment—Management—Cases Suitable for—Advantages to Patient—Advantages to Physician.
   Dr. R. J. Murdock, Blair
6. Sources of Remedies.
   Dr. E. W. Rowe, Lincoln
7. Induced Pregnancy.
   G. W. Shidler, York
8. Diagnosis of Brain Tumors, illustrated by lantern slides.
   G. A. Young, Omaha
9. Health a National Asset
   J. H. Mackay, Norfolk

Tuesday Afternoon, May 10, 1:30
Surgical Section

1. Rupture of the Urinary Bladder. Personal experience with cases. Mechanism of Rupture. Diagnosis. Pathology. Treatment.
   Bernard A. McDermott, Omaha
2. The Importance of Details in Surgery—Brief reference to Preparation; Conditions of Pathology which are controlling in deciding upon operative technique. Estimate of Relative risk in Severe Cases. Exact methods in after treatment, including the utmost discipline of Nurse or Attendant.
   Charles C. Allison, Omaha
3. Pseudo-Mastoiditis.
   James M. Patton, Omaha
4. A Brief Report of the Work of the Nebraska State Orthopedic Hospital with Comments.
   J. P. Lord, Omaha



Hotels

LINCOLN HOTEL—European . Ninth and P Streets	75c and up
NEW LINDELL—American . Thirteenth and M Streets	$2.50 and up
WINDSOR—European . . 228 North Eleventh Street	50c and up
SAVOY—European . . Eleventh and P Streets	75c and up
CAPITAL European Eleventh and P Streets	50c and up
ROYAL—American 1516 O Street	$2.00 and up
DELAVAN—European 119 South 15th Street	$1.50 and up

NSMA

103rd ANNUAL SESSION

NEBRASKA
STATE
MEDICAL
ASSOCIATION

OMAHA HILTON HOTEL

April 25, 26, 27, 28, 1971

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Nebraska State Medical Association
1902 First National Bank Building
Lincoln, Nebraska 68508

THINGS YOU SHOULD KNOW

This program is acceptable for 12 elective hours by the American Academy of General Practice.

REGISTRATION — Grand Ballroom, Omaha Hilton Hotel, 8:00 a.m., Tuesday and Wednesday, April 27, 28, 1971.

GENERAL SESSIONS — Grand Ballroom, Omaha Hilton Hotel.

OF SPECIAL INTEREST

NEBRASKA HIGH SCHOOL TEAM PHYSICIANS' BREAKFAST — Tuesday, April 27th, 7:30 a.m., Dodge Room, Omaha Hilton Hotel.

PAST PRESIDENT'S BREAKFAST — Wednesday, April 28th, 7:00 a.m., Bel-Air Room, Omaha Hilton Hotel.

ANNUAL DISTINGUISHED LUNCHEON — Presidential Address. Installation of New Officers. Presentation of Fifty-Year Service Pins. Annual Distinguished Nebraska Lecture. Wednesday, April 28th, 12:30 p.m., Grand Ballroom, Omaha Hilton Hotel.

PRESIDENT'S RECEPTION — Honoring the President of the Nebraska State Medical Association and the President of the Woman's Auxiliary. Tuesday, April 27th, 5:30 p.m., Dodge Room, Omaha Hilton Hotel.

DINNER DANCE — An evening of fun and relaxation commencing with a beautifully appointed banquet at 7:00 p.m., followed by listening and dancing to the sound of Eddy Haddad and his Orchestra. The dinner dance will be held in the Grand Ballroom of the Omaha Hilton Hotel on Tuesday, April 27th. Tickets are $25 per couple. Reservations should be made through the Omaha-Douglas County Medical Society, 8601 West Dodge Road, Omaha, Nebraska 68114. Richard Q. Crotty, M.D., General Chairman.

SPORTSMAN'S DAY ACTIVITIES

BOWLING — Rose Bowl, 1110 North Saddle Creek Road, Monday, April 26th, 1:00 p.m. Maurice Steinberg, M.D., Chairman.

GOLF TOURNAMENT — Omaha Country Club, 69th and Country Club Road, Monday, April 26th. Tee times 11:00 a.m. to 2:30 p.m. Richard Q. Crotty, M.D., and Carlyle E. Wilson, Jr., M.D., Co-Chairmen.

TENNIS TOURNAMENT — Omaha Country Club, 69th and Country Club Road, Monday, April 26th, 1:00 p.m. William R. Hamsa, Jr., M.D., Chairman.

TRAP SHOOT — Omaha Country Club, Gun Shack, 69th and Country Club Road, Monday, April 26th, 1:00 p.m. William D. Angle, M.D., Chairman.

SPORTSMAN'S DINNER — Omaha Country Club, 69th and Country Club Road, Monday, April 26th; social hour at 5:30 p.m. and dinner at 7:30 p.m. Richard Q. Crotty, M.D., Chairman.

ANCILLARY MEETINGS

AMERICAN COLLEGE OF SURGEONS, NEBRASKA CHAPTER, ANNUAL BUSINESS MEETING — Sunday, April 25th, 6:00 p.m., Winnebago Room, Omaha Hilton Hotel.

INTER-SPECIALTY LIAISON DINNER — Sunday, April 25th, 7:00 p.m., Lewis Room, Omaha Hilton Hotel.

NEBRASKA STATE OBSTETRIC AND GYNECOLOGY SOCIETY BREAKFAST MEETING — Tuesday, April 27th, 7:30 a.m., Capitol Room, Omaha Hilton Hotel.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI MEETING AND SOCIAL HOUR — Tuesday, April 27th, 5:00-6:00 p.m., Lewis Room, Omaha Hilton Hotel.

UNIVERSITY OF NEBRASKA PRECEPTOR BREAKFAST — Wednesday, April 28th, 7:30 a.m., Capitol Room, Omaha Hilton Hotel.

NEBRASKA ASSOCIATION OF PATHOLOGISTS ANNUAL MEETING — Wednesday, April 28th, 4:30 p.m., Bel-Air Room, Omaha Hilton Hotel.

CLARENCE R. BROTT, M.D.
President 1970-1971

ROGER D. MASON, M.D.
President 1971-1972

Officers

President

Clarence R. Brott, M.D., Beatrice	1970-1971
Roger D. Mason, M.D., McCook	1971-1972

Secretary-Treasurer

Russell L. Gorthey, M.D.	Lincoln

Editor

Frank Cole, M.D.	Lincoln

Executive Secretary

Kenneth E. Neff	Lincoln

Board of Councilors

District		Term Expires
1.	Thomas J. Gurnett, M.D., Omaha	1972
2.	C. D. Bell, M.D., Lincoln	1972
3.	H. C. Stewart, M.D., Pawnee City	1972
4.	Robert B. Benthack, M.D., Wayne	1972
5.	Robert M. Sorensen, M.D., Fremont	1973
6.	Houtz G. Steenburg, M.D., Aurora	1973
7.	Lyle H. Nelson, M.D., Crete	1973
8.	Robert W. Waters, M.D., O'Neill	1973
9.	H. V. Smith, M.D., Kearney	1971
10.	Charles W. Landgraf, Jr., M.D., Hastings	1971
11.	Bruce F. Claussen, M.D., North Platte	1971
12.	A. J. Alderman, M.D., Chadron	1971

Chairman, Board of Councilors

Houtz G. Steenburg, M.D., Aurora	1971

Speaker, House of Delegates

William E. Nutzman, M.D., Kearney	1971

Vice Speaker, House of Delegates

Harry W. McFadden, Jr., M.D., Omaha	1971

Delegates to A.M.A.

Earl F. Leininger, M.D., McCook	1971
John R. Schenken, M.D., Omaha	1972

Alternate Delegates to A.M.A.

Roger D. Mason, M.D., McCook	1971
R. F. Sievers, M.D., Blair	1972

Board of Trustees

R. Russell Best, M.D., Omaha, Chairman	1973
George B. Salter, M.D., Norfolk	1974
Carl Frank, M.D., Scottsbluff	1971
H. V. Nuss, M.D., Sutton	1972
Russell L. Gorthey, M.D., Lincoln	

GUEST SPEAKERS

Oliver H. Beahrs, M.D.

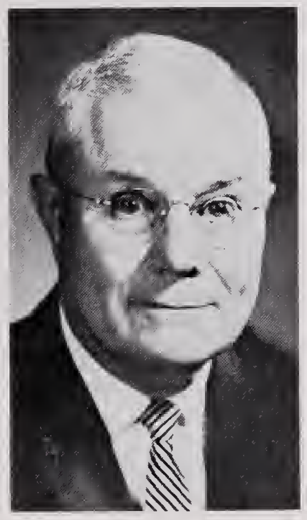
Rochester, Minnesota

Doctor Beahrs graduated from the Northwestern University Medical School in 1942. He has served as Head of the Mayo Clinic Section on General Surgery since 1950, and also served as Professor of Surgery at the Mayo Graduate School of Medicine. He is a past president of the Minnesota Surgical Society and serves on the Council of the Central Surgical Association. He is a member of the Mayo Foundation Board of Trustees and is a member and Vice-Chairman of the Mayo Clinic's Board of Governors.

Walter C. Bornemeier, M.D.

Chicago, Illinois

Doctor Bornemeier graduated from the Northwestern University Medical School in 1929. He is currently serving as the 125th President of the American Medical Association. From 1966 until his election as President-Elect in July, 1969, Doctor Bornemeier served as Speaker of the A.M.A.'s House of Delegates. Doctor Bornemeier was born in Greenwood, Nebraska, in 1901. Doctor Bornemeier is senior attending surgeon at Illinois Masonic Medical Center and for twenty years he was an instructor in surgery at the Northwestern University Medical School. Doctor Bornemeier served in the Army Medical Corps as a major and assistant chief of surgery at the 52nd Station Hospital in Naples, Italy. He holds an honorary membership in the Surgical Society of Rome. Doctor Bornemeier and his wife, the former Mable Kemp, have two daughters and a son.



Sam D. Clements, Ph.D.

Little Rock, Arkansas

Doctor Clements graduated from the University of Houston with a Ph.D. in Clinical Child Psychology in 1960. He currently serves as Associate Professor in the Departments of Psychiatry and Pediatrics, and as Executive Director of the Child Study Center at the University of Arkansas School of Medicine. Doctor Clements has served as Project Director of the National Project on Minimal Brain Dysfunctions in Children of the National Institute of Health and as President of the Division for Children with Communication Disorders of the Council of Exceptional Children. He was a Forum Member of the 1970 White House Conference on Children.

GUEST SPEAKERS

Arthur Cohen, M.D.

San Francisco, California

Doctor Cohen graduated from the State University of New York Downstate Medical Center in 1946. He is currently Chief of the Department of Surgery at Letterman General Hospital in San Francisco, California. Since 1947 he has been a career officer in the Medical Corps of the United States Army, currently holding the rank of Colonel. Doctor Cohen is also a lecturer in surgery at the University of California School of Medicine San Francisco Medical Center and has served as Chief Surgical Consultant to the United States Army in Vietnam.

Jay N. Cohn, M.D.

Washington, D.C.

Doctor Cohn graduated from the Cornell University Medical College in 1956. He currently serves as Chief of the Hypertension and Hemodynamics Department of the Veterans Administration Hospital in Washington, D.C. He also serves as Associate Professor of Medicine at Georgetown University School of Medicine and is Co-Director of the Veterans Administration — Georgetown University Cardiovascular Physiology Training Program. He is currently a consultant in medicine at the Washington Hospital Center and a consultant in medicine at the Providence Hospital. He is a past chairman of the American Federation for Clinical Research.

Ronald Danzig, M.D.

Sherman Oaks, California

Doctor Danzig graduated from the Northwestern University Medical School in 1958. He currently serves as Assistant Clinical Professor of Medicine at the University of Southern California School of Medicine. He is also attending physician in internal medicine at the Los Angeles County - USC Medical Center and is Chairman of the Coronary Care Unit Committee at St. Joseph Hospital in Burbank. He is also senior investigator of the Myocardial Infarction Research Unit at Cedars-Sinai Medical Center in Los Angeles. His primary interests are in hemodynamic characterization of power failure and electrophysiology of AV conduction.

Jerome M. Hershman, M.D.

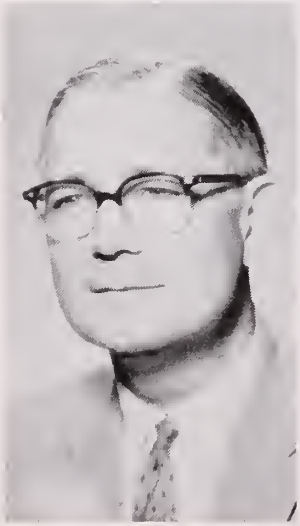
Birmingham, Alabama

Doctor Hershman graduated from the University of Illinois College of Medicine in 1957. He is currently Associate Professor of Medicine of the Division of Endocrinology and Metabolism at the Medical College of Alabama. He is also an attending physician at University Hospital and Director of Metabolic Research at the Veterans Administration Hospital in Birmingham. Doctor Hershman currently serves on the Editorial Board of the **Journal of Clinical Endocrinology and Metabolism.** Doctor Hershman is also a member of the Phi Beta Kappa, Sigma Xi and Pi Mu Epsilon honor societies.

James G. Hughes, M.D.

Memphis, Tennessee

Doctor Hughes graduated from the University of Tennessee College of Medicine in 1935. He currently serves as Professor and Chairman of the Department of Pediatrics at the University of Tennessee College of Medicine. He also serves as Pediatrician-in-Chief of the City of Memphis Hospitals. Doctor Hughes serves as a former President of the American Academy of Pediatrics and as a pediatric consultant to the Surgeon General of the U.S. Army. He is now a Brigadier General in the U.S. Army Reserve and has authored three textbooks on pediatrics and over fifty scientific papers.



R. Bruce Logue, M.D.

Atlanta, Georgia

Doctor Logue graduated from Emory University School of Medicine in 1937. He currently serves as Professor of Medicine in Cardiology at Emory University School of Medicine and as Cardiologist of Emory University Hospital. He is the past chairman of the Board of Examiners of the Sub-Specialty Board in Cardiology of the American Board of Internal Medicine. He is a past president of the American Federation for Clinical Research and a member of the American Clinical and Climatological Association. He is a former editor of the Section on Cardiovascular Disease of the **Annual Review of Medicine** and is currently a co-editor of the Section on Cardiovascular Disease of the Meakins Textbook.

Kenneth R. McCormack, M.D.

San Francisco, California

Doctor McCormack graduated from the McGill University Faculty of Medicine in 1954. He currently serves as Director of the Nuclear Medicine Section of Mt. Zion Hospital and Medical Center in San Francisco and as Associate Clinical Professor at the University of California Medical Center. He is also Associate Director of the Saroni Tumor Institute in San Francisco and serves as a member of the A.M.A. Joint Review Committee on Educational Programs in Nuclear Medicine Technology. Doctor McCormack's primary interests are in nuclear medicine research and teaching.

Alan R. Moritz, M.D.

Cleveland, Ohio

Doctor Moritz graduated from the University of Nebraska College of Medicine in 1923. He is currently Professor of Pathology at Case Western Reserve University School of Medicine, and Chief of Staff of the University Hospitals of Cleveland. Doctor Moritz was born in Hastings, Nebraska, in 1899. He is a recipient of the Gold Headed Cane Award and a past president of the American Association of Pathologists and Bacteriologists. He is also a past president of the American Academy of Forensic Sciences and a past recipient of the Ward Burdick Award of the American Society of Clinical Pathologists. He has authored or co-authored nine books and monographs on pathology and legal medicine, and authored over 100 publications in scientific journals.

George C. Morris, M.D.

Houston, Texas

Doctor Morris graduated from the University of Pennsylvania School of Medicine in 1948. He currently serves as Professor of Surgery at the Baylor University College of Medicine and is attending in surgery at the Ben Taub General Hospital in Houston. He is also senior attending in surgery at Houston's Methodist Hospital and on the consulting staff of the Texas Children's Hospital. Doctor Morris has been presented numerous awards.

GUEST SPEAKERS

Mark N. Ozer, M.D.

Washington, D.C.

Doctor Ozer graduated from Boston University School of Medicine in 1957. He currently serves as Assistant Professor in Neurology at George Washington University School of Medicine, and as Associate Neurologist at the Children's Hospital of the District of Columbia. Doctor Ozer is also Director of the Learning Research Unit of the Department of Neurology of Children's Hospital and is a consultant neurologist to the U.S. Air Force, and to the U.S. Office of Education, Bureau of Education of the Handicapped, Institute of Behavioral Research. He is also a Clinical Assistant Professor in Neurology at the University of Maryland School of Medicine.

Lawrence T. Taft, M.D.

Bronx, New York

Doctor Taft graduated from the State University of New York Downstate Medical Center in 1950. He currently serves as Professor of Pediatrics and Rehabilitation Medicine at the Albert Einstein College of Medicine of Yeshiva University. He is also the Associate Director for the Clinical Services and Training Program of the Rose F. Kennedy Center for Research in Mental Retardation and Human Development. Doctor Taft has been presented the Charles Raizen Distinguished Scholar in Child Development Award and is a Fellow of the American Academy of Pediatrics, the American Pediatric Society, the American Academy of Cerebral Palsy and the American Association on Mental Deficiency.

Jesse E. Thompson, M.D.

Dallas, Texas

Doctor Thompson graduated from the Harvard Medical School in 1943. He currently serves as Clinical Professor of Surgery at the University of Texas Southwestern Medical School in Dallas, and as attending surgeon at Baylor University Medical Center, Parkland Memorial Hospital and the Presbyterian Hospital in Dallas. He previously served as Chief of the Neurological Section of Walter Reed General Hospital and has been in the practice of general and vascular surgery in Dallas, Texas, since 1954.

Technical Exhibitors

Abbott Laboratories, North Chicago, Illinois

Ayerst Laboratories, New York, New York

Blue Cross - Blue Shield, Omaha, Nebraska

Coca-Cola Company, Skokie, Illinois

Dairy Council of Central States, Omaha, Nebraska

Donley Medical Supply Company, Lincoln, Nebraska

Encyclopaedia Britannica, Chicago, Illinois

Kirkpatrick, Pettis, Smith, Polian, Inc., Omaha, Nebraska

Muckle Professional Equipment Company, Denver, Colorado

Mutual of Omaha, Omaha, Nebraska

National Life of Vermont, Omaha, Nebraska

Nebraska - South Dakota Regional Medical Program, Lincoln, Nebraska

Pitney-Bowes, Inc., Omaha, Lincoln, Grand Island

Professional Credit Control, Inc., Lincoln, Nebraska

Rowell Laboratories, Inc., Baudette, Minnesota

Sandoz Pharmaceuticals, Hanover, New Jersey

W. B. Saunders Company, Philadelphia, Pennsylvania

Schering Laboratories, Union, New Jersey

G. D. Searle and Company, Chicago, Illinois

Smith, Miller & Patch, Inc., New Brunswick, New Jersey

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Acknowledgements

The Nebraska State Medical Association takes this opportunity to recognize and express its appreciation for the grants received from the following organizations:

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Scientific Sessions Committee

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Charles F. Ashby, M.D.	Geneva
John D. Coe, M.D.	Omaha
Bruce F. Claussen, M.D.	North Platte
Russell L. Gorthey, M.D.	Lincoln

Announcements

House of Delegates

1st Session: Sunday, April 25, 1971, 3:00 p.m., Grand Ballroom

2nd Session: Monday, April 26, 1971, 8:00 a.m., Grand Ballroom

3rd Session: Wednesday, April 28, 1971, 7:30 a.m., Grand Ballroom

Board of Councilors

1st Session: Sunday, April 25, 1971, 1:30 p.m., Clark Room

2nd Session: Monday, April 26, 1971, 11:00 a.m., Bel-Air Room

3rd Session: Wednesday, April 28, 1971, 10:00 a.m., Clark Room

Board of Trustees

Tuesday, April 27, 1971, 7:30 a.m., Bel-Air Room

Nominating Committee

1st Session: Monday, April 26, 1971, 10:30 a.m., Conference Room

2nd Session: Tuesday, April 27, 1971, 11:15 a.m., Bel-Air Room

3rd Session: Tuesday, April 27, 1971, 4:30 p.m., Bel-Air Room

CONDENSED SCHEDULE OF PROGRAM

SUNDAY, APRIL 25

1:30 Board of Councilors, Clark Room

3:00 House of Delegates, Grand Ballroom

MONDAY, APRIL 26

Morning

8:00 House of Delegates, Grand Ballroom

10:30 Nominating Committee, Conference Room

11:00 Board of Councilors, Bel-Air Room

Afternoon

11:00-2:30 Golf Tournament, Omaha Country Club

1:00 Trap Shoot, Omaha Country Club

1:00 Bowling, Rose Bowl

1:00 Tennis, Omaha Country Club

5:30 Sportsman's Social Hour, Omaha Country Club

7:30 Sportsman's Dinner, Omaha Country Club

TUESDAY, APRIL 27

Morning

7:30 Board of Trustees, Bel-Air Room

8:00 Registration, Grand Ballroom

8:00 Exhibits Open

9:15-9:30
Opening Ceremonies, Grand Ballroom
Welcome
Invocation
Necrology

9:30-11:15
Symposium on Thyroid Disease, Grand Ballroom

11:15 Nominating Committee, Bel-Air Room

11:15 Visit the Exhibits

12:00 Noon Luncheon, Dodge Room

Afternoon

2:00 Visit the Exhibits

2:30-4:30
Symposium on Arterial Vascular Insufficiency, Grand Ballroom

4:30 Nominating Committee, Bel-Air Room

4:30 Visit the Exhibits

5:30 PRESIDENT'S RECEPTION FOR MEMBERS AND WIVES,
Dodge Room

7:00 DINNER, DANCE, Grand Ballroom

WEDNESDAY, APRIL 28

Morning

7:30 House of Delegates, Grand Ballroom

8:00 Registration, Grand Ballroom

8:00 Visit the Exhibits

9:30-11:15
Symposium on the Current Management of Myocardial Infarction, Grand Ballroom

10:00 Board of Councilors, Clark Room

11:15 Visit the Exhibits

12:30 Annual Distinguished Luncheon, Grand Ballroom
Presidential Address
Installation of New Officers
Presentation of 50-Year Pins
ANNUAL DISTINGUISHED NEBRASKA LECTURE

Afternoon

2:00 Visit the Exhibits

2:30-4:30
Symposium on Learning Disabilities, Grand Ballroom

4:30 Visit the Exhibits

PROGRAM

Nebraska State Medical Association

103rd Annual Session

TUESDAY, APRIL 27, 1971

8:00 Registration, Grand Ballroom

8:00 Exhibits Open

9:15 **OPENING CEREMONIES — Grand Ballroom**

Welcome

—Clarence R. Brott, M.D., President

Invocation

—Reverend Archie Madsen, District President, American Lutheran Church

Necrology

—George B. Salter, M.D., Norfolk

9:30 to 11:15 **SYMPOSIUM ON THYROID DISEASE — Grand Ballroom**

Moderator—

Robert E. Ecklund, M.D., Associate Professor of Medicine, Department of Internal Medicine, University of Nebraska College of Medicine

"New Tests of Thyroid Function and Their Use in Diagnosis of Thyroid Disease"

—Kenneth R. McCormack, M.D., Head, Division of Nuclear Medicine, Mt. Zion Hospital, San Francisco, California

"The Management of the Nodular Thyroid Gland and Its Relation to Thyroid Carcinoma"

—Oliver H. Beahrs, M.D., Head, Section on General Surgery, Mayo Clinic, Rochester, Minnesota

"Current Thoughts on Management of Hyperthyroidism"

—Jerome M. Hershman, M.D., Associate Professor of Medicine, Division of Endocrinology and Metabolism, Medical College of Alabama, Birmingham, Alabama

Questions and Discussion

11:15 Visit the Exhibits

12:00 Noon Luncheon — Dodge Room

—Clarence R. Brott, M.D., President, Presiding

"The Changing Scene in Medicine"

—Walter C. Bornemeier, M.D., President, American Medical Association

Presentation of AMA-ERF Checks

PROGRAM

TUESDAY AFTERNOON, APRIL 27, 1971

2:00 Visit the Exhibits

2:30 to 4:30 **SYMPOSIUM ON ARTERIAL VASCULAR INSUFFICIENCY — Grand Ballroom**

Moderator—

Herbert E. Reese, M.D., Lincoln

"Management of Vascular Injuries"

—Arthur Cohen, M.D., Chief, Department of Surgery, Letterman General Hospital, San Francisco, California

"Cerebral Vascular Insufficiency"

—Jesse E. Thompson, M.D., Clinical Professor of Surgery, University of Texas Southwestern Medical School, Dallas, Texas

"Aortic and Peripheral Arterial Disease"

—George C. Morris, M.D., Professor of Surgery, Baylor University College of Medicine, Houston, Texas

Questions and Discussion

4:30 Visit the Exhibits

5:30 President's Reception for Members and Wives — Dodge Room

7:00 Dinner Dance — Grand Ballroom, Omaha Hilton Hotel

PROGRAM

WEDNESDAY MORNING, APRIL 28, 1971

8:00 Registration, Grand Ballroom

8:00 Visit the Exhibits

9:30 to 11:15 **SYMPOSIUM ON THE CURRENT MANAGEMENT OF MYOCARDIAL INFARCTION — Grand Ballroom**

Moderator—

Richard W. Booth, M.D., Professor of Medicine and Director, Cardiac Center, Creighton University School of Medicine

"Recognition and Management of Heart Failure Due to Myocardial Infarction"

—R. Bruce Logue, M.D., Professor of Medicine in Cardiology, Emory University School of Medicine, Atlanta, Georgia

"Newer Concepts in the Management of Shock After Myocardial Infarction"

—Jay N. Cohn, M.D., Chief, Hypertension and Hemodynamics Department, Veterans Administration Hospital, Washington, D.C.

"Diagnosis and Management of Arrhythmias Associated With Myocardial Infarction"

—Ronald Danzig, M.D., Assistant Clinical Professor of Medicine, University of Southern California School of Medicine, Sherman Oaks, California

Questions and Discussion

11:15 Visit the Exhibits

PROGRAM

WEDNESDAY NOON, APRIL 28, 1971

12:30 ANNUAL DISTINGUISHED LUNCHEON **— Grand Ballroom**

For Members and Wives

—Carlyle E. Wilson, Jr., M.D., President, Omaha-Douglas County Medical Society, Presiding

Presidential Address

—Clarence R. Brott, M.D.

Installation of Roger D. Mason, M.D.

Presentation of Fifty-Year Service Pins

Allan B. Anderson, M.D.
Pawnee City

E. E. Angle, M.D.
Lincoln

Charles F. Heider, Sr., M.D.
North Platte

George L. Pinney, M.D.
Hastings

David D. Stonecypher, Sr., M.D.
Nebraska City

James G. Vetter, M.D.
Omaha

T. L. Weekes, M.D.
Nebraska City

ANNUAL DISTINGUISHED NEBRASKA LECTURE

Sponsored by the Nebraska Medical Foundation, Inc.

"Dialogues With the Dead"

—Alan R. Moritz, M.D., Cleveland, Ohio

PROGRAM

WEDNESDAY AFTERNOON, APRIL 28, 1971

2:00 Visit the Exhibits

2:30 **SYMPOSIUM ON LEARNING DISABILITIES — Grand Ballroom**
4:30

Moderator and Practical Contributor—

James G. Hughes, M.D., Professor and Chairman, Department of Pediatrics, University of Tennessee College of Medicine, Memphis, Tennessee

"The Neurological Aspects of Learning Problems and Therapeutic Approaches"

—Mark N. Ozer, M.D., Assistant Professor of Neurology, George Washington University School of Medicine, Associate Neurologist, Children's Hospital, Washington, D.C.

"The Inter-Relationships Between Medicine and Education Concerning Learning Disabilities"

—Sam D. Clements, Ph.D., Associate Professor, Department of Psychiatry and Pediatrics, Executive Director, Child Study Center, University of Arkansas School of Medicine, Little Rock, Arkansas

"The Responsibility and Supporting Activity of the Primary Physician Responsible for Managing a Child With a Learning Disability"

—Lawrence T. Taft, M.D., Professor of Pediatrics and Rehabilitation Medicine, Albert Einstein College of Medicine of Yeshiva University, Bronx, New York

Questions and Discussion

4:30 Visit the Exhibits

Nebraska State Medical Association
Organized 1868
SUUM CUIQUE
Incorporated 1919

Past Presidents

Nebraska State Medical Association

Gilbert C. Monell, M.D., Omaha	1868-69
James H. Peabody, M.D., Omaha	1869-70
N. B. Larsh, M.D., Nebraska City	1870-71
R. R. Livingston, M.D., Plattsmouth	1871-72
A. Bowen, M.D., Nebraska City	1872-73
H. P. Mathewson, M.D., Omaha	1873-74
John Black, M.D., Plattsmouth	1874-75
L. H. Robbins, M.D., Lincoln	1875-76
J. P. Peck, M.D., Omaha	1876-77
L. J. Abbott, M.D., Fremont	1877-78
E. M. Whitten, M.D., Nebraska City	1878-79
Harvey Link, M.D., Millard	1879-80
S. D. Mercer, M.D., Omaha	1880-81
M. W. Stone, M.D., South Omaha	1881-82
A. H. Sowers, M.D., Lincoln	1882-83
Victor H. Coffman, M.D., Omaha	1883-84
F. G. Fuller, M.D., Grand Island	1884-85
W. W. Knapp, M.D., Lincoln	1885-86
Richard C. Moore, M.D., Omaha	1886-87
George H. Peebles, M.D., Lincoln	1887-88
Milton Lane, M.D., Kearney	1888-89
J. C. Denise, M.D., Omaha	1889-90
D. A. Walden, M.D., Beatrice	1890-91
Charles Inches, M.D., Scribner	1891-92
M. L. Hildreth, M.D., Lyons	1892-93
A. S. von Mansfelde, M.D., Ashland	1893-94
H. B. Lowry, M.D., Lincoln	1894-95
J. E. Sumners, M.D., Omaha	1895-96
F. D. Haldeman, M.D., Ord	1896-97
Wilson O. Bridges, M.D., Omaha	1897-98
A. R. Mitchell, M.D., Lincoln	1898-99
Robert McConaughy, M.D., York	1899-00
H. M. McClanahan, M.D., Omaha	1900-01
Wm. B. Eby, M.D., Ainsworth	1901-02
A. B. Anderson, M.D., Pawnee City	1902-03
B. R. Crummer, M.D., Omaha	1903-04
R. C. McDonald, M.D., Fremont	1904-05
A. F. Jonas, M.D., Omaha	1905-06
F. A. Long, M.D., Madison	1906-07
Harold Gifford, M.D., Omaha	1907-08
L. M. Shaw, M.D., Osceola	1908-09
P. H. Salter, M.D., Norfolk	1909-10
J. P. Lord, M.D., Omaha	1910-11
A. D. Nesbit, M.D., Tekamah	1911-12
I. N. Pickett, M.D., Odell	1912-13
D. C. Bryant, M.D., Omaha	1913-14
L. P. Gilligan, M.D., O'Neill	1914-15
E. W. Rowe, M.D., Lincoln	1915-16
W. F. Milroy, M.D., Omaha	1916-17 (to 12-31-17)
C. L. Mullins, M.D., Broken Bow	1918

Past Presidents

Nebraska State Medical Association

J. M. Bannister, M.D., Omaha	1919
H. W. Orr, M.D., Lincoln	1920
M. S. Moore, M.D., Gothenburg	1921
B. B. Davis, M.D., Omaha	1922
B. F. Bailey, M.D., Lincoln	1923
Morris Nielsen, M.D., Blair	1924
Palmer Findley, M.D., Omaha	1925
H. J. Lehnhoff, M.D., Lincoln	1926
H. E. Potter, M.D., Fairbury	1927
B. R. McGrath, M.D., Grand Island	1928-29 (to 5-14-29)
F. S. Owen, M.D., Omaha	1929-30
K. S. J. Hohlen, M.D., Lincoln	1930-31
Lucian Stark, M.D., Norfolk	1931-32
A. E. Cook, M.D., Randolph	1932-33
Adolph Sachs, M.D., Omaha	1933-34
Joseph Bixby, M.D., Geneva	1934-35
Claude A. Selby, M.D., North Platte	1935-36
George W. Covey, M.D., Lincoln	1936-37
R. W. Fouts, M.D., Omaha	1937-38
Homer Davis, M.D., Genoa	1938-39
A. L. Miller, M.D., Kimball	1939-40
Clayton F. Andrews, M.D., Lincoln	1940-41
W. P. Wherry, M.D., Omaha	1941-42
Dexter D. King, M.D., York	1942-43
A. L. Cooper, M.D., Scottsbluff	1943-44
Floyd L. Rogers, M.D., Lincoln	1944-45
Charles McMartin, M.D., Omaha	1945-46
Earle G. Johnson, M.D., Grand Island	1946-47
G. E. Charlton, M.D., Norfolk	1947-48
J. E. M. Thomson, M.D., Lincoln	1948-49
J. D. McCarthy, M.D., Omaha	1949-50
C. H. Sheets, M.D., Omaha	1950-51
D. B. Steenburg, M.D., Aurora	1951-52
Harold S. Morgan, M.D., Lincoln	1952-53
James F. Kelly, M.D., Omaha	1953-54
Earl F. Leininger, M.D., McCook	1954-55
Wm. E. Wright, M.D., Creighton	1955-56
J. M. Woodward, M.D., Lincoln	1956-57
R. Russell Best, M.D., Omaha	1957-58
Fay Smith, M.D., Imperial	1958-59
E. E. Koebbe, M.D., Columbus	1959-60
Fritz Teal, M.D., Lincoln	1960-61
A. J. Offerman, M.D., Omaha	1961-62
O. A. Kostal, M.D., Hastings	1962-63
R. F. Sievers, M.D., Blair	1963-64
R. E. Garlinghouse, M.D., Lincoln	1964-65
Willis D. Wright, M.D., Omaha	1965-66
Dan A. Nye, M.D., Kearney	1966-67
Robert J. Morgan, M.D., Alliance	1967-68
Frank H. Tanner, M.D., Lincoln	1968-69
J. Whitney Kelley, M.D., Omaha	1969-70

MRS. JOHN C. FILKINS

Omaha, Nebraska

President, 1970-1971

MRS. LELAND J. OLSON

Omaha, Nebraska

President, 1971-1972

MRS. WILLIAM BLACKSTONE

Longview, Washington

Director, Woman's Auxiliary to the American Medical Association

46th ANNUAL MEETING
OF THE
WOMAN'S AUXILIARY TO THE
NEBRASKA STATE MEDICAL ASSOCIATION

A CORDIAL INVITATION IS EXTENDED TO EACH PHYSICIAN'S WIFE IN NEBRASKA. WE URGE YOU TO REGISTER AND ATTEND THE ENTIRE PROGRAM AS OUTLINED ON THE FOLLOWING PAGES.

Registration—

Sunday, April 25 — 3:00 to 5:00 p.m., Grand Ballroom, Omaha Hilton Hotel

Monday, April 26 — 8:30 to 3:00 p.m., Grand Ballroom, Omaha Hilton Hotel

Tuesday, April 27 — 8:30 to 12:30 p.m., Grand Ballroom, Omaha Hilton Hotel

Wednesday, April 28 — 8:30 to 10:00 a.m., Grand Ballroom, Omaha Hilton Hotel

CONVENTION COMMITTEES

General Chairman—
Mrs. Vernon Ward

Registration Chairmen—
Mrs. Willis Wright
Mrs. James Donelan

Social Chairman—"April in Paris"
Mrs. Arnold Lempka

Luncheon—
Mrs. John Coe

Reservations—
Mrs. James F. Kelly, Jr.

Models—
Mrs. Robert Murphy
Mrs. Gilbert Schreiner

Courtesy—
Mrs. Richard Svehla
Mrs. William Karrer

Hostesses—
Mrs. Chester Farrell
Mrs. Maurice Grier
Mrs. Donald Pavelka

Tickets and Finance—
Mrs. Gilbert Schreiner

Publicity Chairmen—
Mrs. Arnold Lempka
Mrs. John Filkins

Hostess Auxiliary—
Douglas County Medical Auxiliary

Woman's Auxiliary

PROGRAM

MONDAY, APRIL 26, 1971

8:30-3:00 Registration, Grand Ballroom, Omaha Hilton Hotel

8:30 Rolls and Coffee, Lewis Room

9:00 Pre-Convention Executive Board Meeting, Lewis Room (1971-72 Board Members Included)
Mrs. John Filkins, Presiding
Reports of Officers and State Chairmen

12:00 Luncheon, Clark Room

1:30 Annual Business Meeting, Lewis Room *(All Members Invited)
Mrs. John Filkins, Presiding
Reports of County Presidents
Memorial Service
Election of Officers

4:00 Sherry Tea, Lewis Room
*(All Members Invited)

7:00 M.D.'s Wives No-Host Dinner

TUESDAY, APRIL 27, 1971

8:30-12:30 Registration, Grand Ballroom, Omaha Hilton Hotel

12:00-12:30 Social Hour, Grand Ballroom East, Omaha Hilton Hotel

12:30 "April in Paris" Style Show - Luncheon. Tickets available at the Auxiliary Registration Desk, Omaha Hilton Hotel
Guest Speaker: Mrs. William Blackstone, Director, Woman's Auxiliary to the American Medical Association
Installation of New Officers
Fashion Show — Nebraska Clothing Company

5:30 President's Reception for Members and Wives, Dodge Room

7:00 Dinner - Dance, Grand Ballroom, Omaha Hilton Hotel

WEDNESDAY, APRIL 28, 1971

8:30-10:00 Registration, Grand Ballroom, Omaha Hilton Hotel

8:30 Rolls and Coffee, Lewis Room

9:00 Post-Convention Executive Board Meeting, Lewis Room
Mrs. Leland Olson, Presiding
(1970-1971 Board Members Included)

12:30 Combined Auxiliary and Association Luncheon, Grand Ballroom
Presidential Address
Installation of NSMA Officers
Presentation of Fifty-Year Service Pins
Annual Distinguished Nebraska Lecture Sponsored by the Nebraska Medical Foundation, Inc.

2:30 Symposium on Learning Disabilities, Grand Ballroom

Technical Exhibitors

103RD ANNUAL SESSION

ABBOTT LABORATORIES, North Chicago, Illinois — You are cordially invited to visit the Abbott booth where Ogen® (piperazine estrone sulfate) in the new 21-Paks will be featured. An interesting concept in the management of hypertension will also be available.

AYERST LABORATORIES, New York, New York —Our representatives look forward to a visit with you, and for the opportunity to discuss the Ayerst products and services of interest to you.

BLUE CROSS - BLUE SHIELD, Omaha, Nebraska — Representatives will be available to discuss new concepts of prepayment of health care and to answer any questions relating to Blue Shield benefits or procedures.

COCA-COLA COMPANY, Skokie, Illinois — Stop by our booth for a free Coke or Fresca. Coca-Cola . . . It's the real thing! And sugar-free Fresca . . . only two calories per 8 ounce serving.

DAIRY COUNCIL OF CENTRAL STATES, Omaha, Nebraska — "Nutrition . . . Does It Bore You to Tears?" As subject matter for medical science, it's as elementary as Vitamin A.B.C. Nutritional resources do exist to help combat malnutrition now . . . not only among the poor, but throughout our society. Dairy Council's health and nutrition education programs and services can help you to bring nutrition to life.

ENCYCLOPAEDIA BRITANNICA, INC., Chicago, Illinois — Encyclopaedia Britannica welcomes delegates to the Nebraska State Medical Association Annual Session. As part of our exhibit, we will have on display the great new edition of Britannica, Great Books of the Western World, the Britannica Junior and other related materials. Stop and inspect these products in Booth #11. They are available to the delegates at our convention offer.

KIRKPATRICK, PETTIS, SMITH, POLIAN, INC., Omaha, Nebraska — Kirkpatrick, Pettis, Smith, Polian, Inc. with offices in Grand Island, Lincoln, Chappell, Alliance, Red Oak and headquarters in Omaha, will expose to members a vast array of investment opportunities. The fifty year old investment banking firm will display investments suitable for many various objectives including high quality tax-exempt and corporate bonds to common stocks and mutual funds.

MUCKLE PROFESSIONAL EQUIPMENT COMPANY, Denver, Colorado — The Muckle Professional Equipment Company, specialists in the sales and service of electromedical equipment, welcomes you to visit their exhibit to view the latest developments in cardiac monitoring systems for large and small hospitals, plus battery operated portable monitoring/defibrillator systems, single and multichannel electrocardiograph units including the new ink jet recorders, and stress exercise units.

MUTUAL OF OMAHA, Omaha, Nebraska — Representatives will be present to discuss Physician Insurance Plans and Medicare.

NEBRASKA - SOUTH DAKOTA REGIONAL MEDICAL PROGRAM, Lincoln, Nebraska — The booth of the Regional Medical Program will contain a complete ROCOM Unit plus a sound - slide presentation. This presentation will explain the organizational make-up of the Regional Medical Program service from the national to local level. It will also demonstrate some of the activities of the current projects. The ROCOM unit will be on display to show the type of unit being distributed for use throughout the state.

PITNEY-BOWES, INC., Omaha, Nebraska — Pitney-Bowes will feature our new fast-statement system. This system will copy, fold and stuff and meter up to 1,200 statements an hour. They will also be featuring new small, inexpensive postage meters for the small users.

Technical Exhibitors

103RD ANNUAL SESSION

PROFESSIONAL CREDIT CONTROL, INC., Lincoln, Nebraska — Carefully trained personnel — to assist in the handling of your delinquent accounts. Our approach is tactful and persuasive, without being offensive. All money is paid directly to you. Our representatives will welcome your investigation of this fine service, limited to professional business only, and designed to save you time, worry and money in keeping your accounts current.

ROWELL LABORATORIES, INC., Baudette, Minnesota — Rowell Laboratories presents the C-Ron family of oral hematinics for iron deficiency anemia. Included are C-Ron, C-Ron Forte, C-Ron FA, and new C-Ron Freckles. Our professional representatives will gladly discuss these and other Rowell specialties with you.

SANDOZ PHARMACEUTICALS, Hanover, New Jersey — Sandoz Pharmaceuticals invites you to visit our display at booth #1, where our representatives will be happy to provide you with complete information on our new product, Serentil!

W. B. SAUNDERS COMPANY, Philadelphia, Pennsylvania — Saunders will have on display a complete line of their medical books, including many new titles and new editions — such as, Perloff: Congenital Heart Disease; Debre: Clinical Virology; DeLand and Wagner: Nuclear Medicine —Lung and Heart—Vol. II; Anson and McVay: Surgical Anatomy; Guyton: Medical Physiology; O'Donoghue: Injuries to Athletes; and many others.

SCHERING LABORATORIES, Union, New Jersey — Schering Laboratories invites you to visit their exhibit, Booth #14, where their representatives will be available to discuss with you any questions you may have on Garamycin® Injectable, Celestrone® Soluspan®, Injection, Tinactin®, Drixoral®, Etrafon®, Valisone®, Afrin® or any other Schering product.

G. D. SEARLE AND COMPANY, Chicago, Illinois — You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be information on Demulen®, Enovid®, Aldactazide®, Flagyl®, Lomotil®, Pro-Banthine® and other drugs of interest.

SMITH, MILLER & PATCH, INC., New Brunswick, New Jersey — Smith, Miller & Patch will feature our new non-barbiturate hypnotic, Somnafac & Somnafac Fourte; Deconamine, a potent oral antihistamine and decongestant in three dosage forms; Pyocidin -HC Otic Solution; Vasocidin Ophthalmic-Otic Solution; our hematinics, Vitron-C and Vitron-C Plus; and our specialty bowel regulator Kondremul.

E. R. SQUIBB & SONS, New York, New York — E. R. Squibb & Sons, Inc. has long been a leader in development of new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the Medical Profession in new products or improvements in products already marketed. At our booth we will be pleased to present up-to-date information on these products.

WESTAMERICA SECURITIES, INC., Lincoln, Nebraska — Westamerica Securities, Inc., the professional money management people, will feature investment services which provide substantial income tax relief for professional people. Qualified tax sheltered retirement plans, established drilling funds, and real estate partnership programs, all registered with the Securities and Exchange Commission, will be offered.

Other Exhibitors at the Annual Session

Donley Medical Supply Company, Lincoln, Nebraska

National Life of Vermont, Omaha, Nebraska

Upjohn Company, Kalamazoo, Michigan

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Physicians' Classified

Advertisements in this column are at a rate of ten cents per word with a minimum of $4.00 per insertion. Copy must be received by the fifth of the month preceding date of publication and should not exceed 50 words. Advertisements from members of the Nebraska State Medical Association will be accepted without charge for one issue. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

CLINIC AVAILABLE — General practice in furnished clinic. County seat town, SW Nebraska. 3 nursing homes in town, good territory. Write Box 8, Beaver City, Nebraska.

RADIOLOGIST seeks position in small hospital in Nebraska. Contact Box 27, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

FOR SALE — Completely modernized, excellently equipped clinic. Medical and surgical location for past 40 years. Contact Box 1010, Kimball, Nebraska 69145.

YOUNG G.P. needs help in small Western Nebraska ranch town. Part-time, locum tenens, partnership, you name it. Low tempo general practice with office attached to good short care and long care facilities. Unlimited recreation in area. Contact: Joe Saults, M.D., Mullen Clinic, Mullen, Nebraska 69152, 308-546-2213.

DILLON, COLORADO — Luxury condominium on lake, sleeps 6, automatic kitchen, 2 bedrooms, 2 bathrooms, fireplace, magnificent view. Maid service. Ski Arapahoe, Keystone, Vail, Loveland, and Breckenridge. Summer—fishing, sailing, pool, tennis. $60.00 nightly for 6, less by week. Contact S. C. Percefull, M.D., 3535 South Lafayette, Englewood, Colorado 80110. Phone 303-781-7824.

IMMEDIATE OPENING — Physician for emergency and outpatient department of hospital in Omaha. Fee for service with minimum guarantee. One month's paid vacation and two weeks yearly for meetings. Contact Box 28, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: ¼ grain; ½ grain; scored 1 grain; 1½ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

Medicinews . . .

Student loans

An interest-free loan plan for medical students has been announced by the American Medical Association Education and Research Foundation.

The program will be conducted in cooperation with U.S. medical schools, which will be asked to provide grants and scholarships for the first two years of medical school, with AMA-ERF guaranteeing loans on an interest-free basis all four years. The borrower would assume interest payments during his internship and residency and be responsible for both interest and principal payments when he enters practice. He has 10 years following completion of training to repay the loan.

The accepted applicant is eligible for loans of up to $1,500 each year during the freshman and sophomore years and up to $4,500 during the junior and senior years.

Loans to 43,631 students have totalled $48,571,275 since the program's inception.

The AMA Education and Research Foundation, which was founded to promote the betterment of public health through scientific and medical research, also provides financial aid to medical schools. It has contributed more than $19,000,000 to U. S. schools since 1951.

The Foundation's funds are derived from contributions and grants from physicians, their wives, medical societies, corporations, foundations and interested individuals.

Information and application forms for student loans are available from the American Medical Association Education and Research Foundation Student Loan Guarantee Fund, 535 North Dearborn, Chicago 60610.

ACR announces

Dr. Ronald E. Waggener and Dr. Lawrence R. James, both of Omaha, Nebraska, were recently named Fellows of the American College of Radiology.

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iency

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Medicinews . . .

Medicredit

"The American medical-health care system needs something more than a poultice, but something far less than burial," Dr. Max H. Parrott, chairman of the Board of Trustees of the American Medical Association told the Senate Health Subcommittee.

He and Dr. Russell B. Roth, speaker of the AMA House of Delegates, outlined improvements in the present health care system that could be achieved largely through private means. They also stressed the AMA's Medicredit bill which would assure the poor access to quality health care, help others purchase private health insurance through a sliding scale of tax credits, and insure everyone against financially catastrophic illness.

Medicredit is currently supported by 121 members of Congress.

ADVICE TO AUTHORS

The Editor of this Journal assumes no responsibility for opinions and claims expressed in the articles published herein.

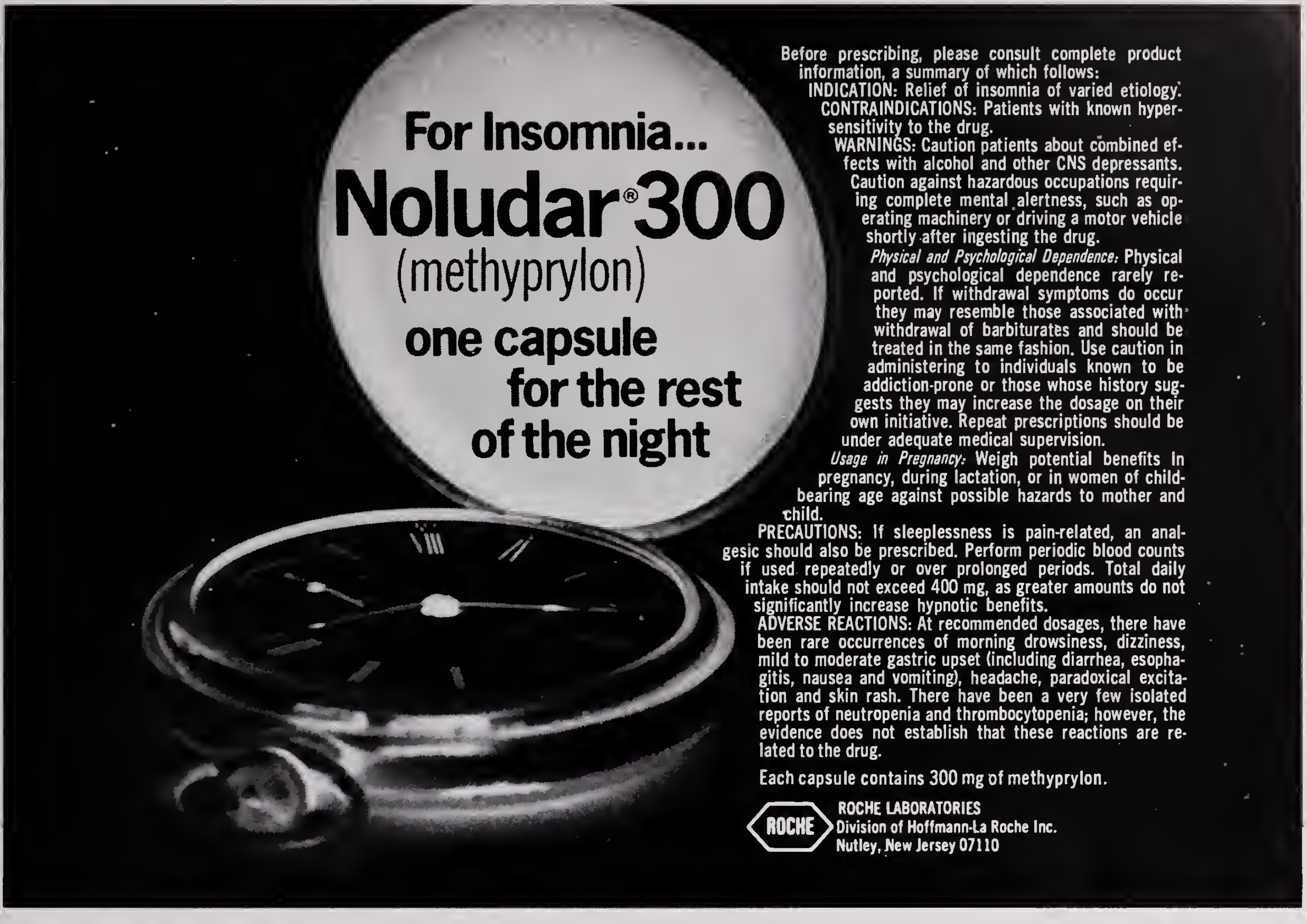
Manuscripts to be presented for publication in the JOURNAL should be typewritten, double-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8½ by 11 in.) white paper. Wide margins (at least 1¼ in. on left) should be left free of typing. On the first or title-page should be shown the title of the article, the name (or names) of the author, his degree and other significant credits. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the Journal's address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.



Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE
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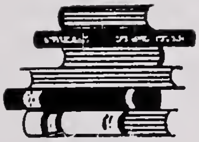
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Books



AMA Drug Evaluations 1971, prepared by the AMA Council on Drugs, the staff of the AMA Department of Drugs, and more than 300 consultants; first edition. Published 1971 by the AMA, Chicago; 983 pages (8¼″ x 10⅞″); flexible cover; $15.00.

This is a new publication, and replaces older books written by the Council on Drugs (originally called the Council on Pharmacy and Chemistry) — New and Nonofficial Remedies, New and Nonofficial Drugs, and New Drugs. The book opens with General Information, which is followed by 90 chapters, after which there is a New Drugs Section, an appendix, and the index.

We have gone fairly quickly from NNR to NND and to ND. Now we may consult AMA-DE, USP, NF, PDR, Drugs of Choice, and pharmacology texts. USP and NF are different, I suppose, but the others are somewhat alike. AMA-DE is new and very large and good. It has an index for indications, another for adverse reactions, and a third for the drugs themselves, if you like three. It's worth the money. It's up-to-date.

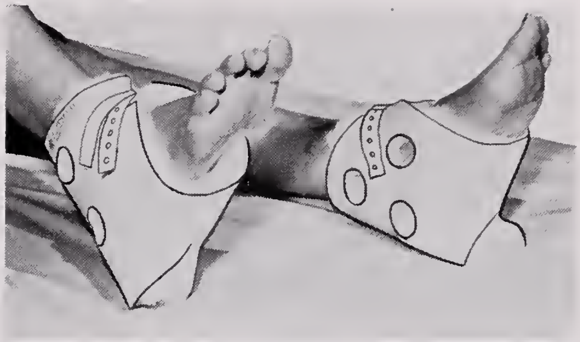
—F.C.

'I hope you're not a PRACTICING physician. I need someone who has already learned."

Dimetapp Extentabs®

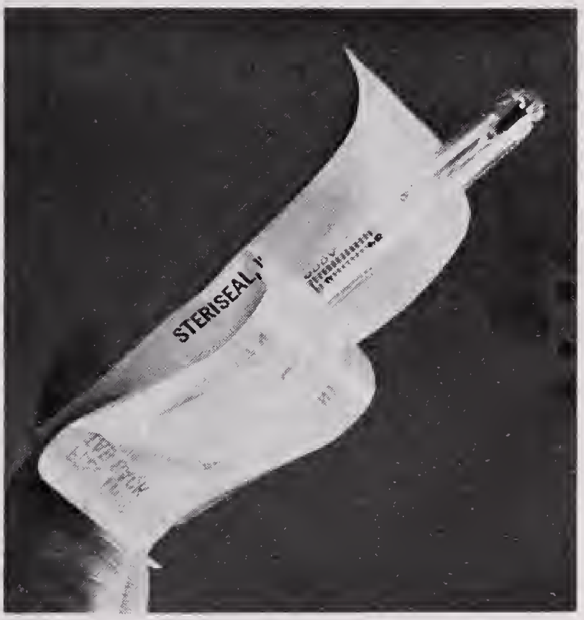
INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

It's New . . .



Heel protector

The Posey Company, 39 South Santa Anita Avenue, Pasadena, California 91107, introduces the newest model in its line of popular ventilated heel protectors. Designated the "Swiss Cheese" Heel Protector, $4.80 pair, this device incorporates a new design and hook and eye fastener.



Sterile film sheath

Sterile Film Sheath protected by a peel-back wrap eliminates thermometer sterilization. Thermometer is inserted into one-mil thick sterile sheath, and outer wrap is peeled back, leaving thermometer encased in sterile film. Once temperature has been taken, sheath may be discarded before reading temperature. SteriTemp is a product of Steriseal, Incorporated, 35 Commerce St., Chatham, New Jersey 07928, and incorporates film extruded from Union Carbide resin.

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Councilor Districts and Counties

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Seventh District: Councilor: Lyle Nelson, Crete. Counties: Saline, Clay, Fillmore, Nuckolls, Thayer, Jefferson.

Eighth District: Councilor: Robert Waters, O'Neill. Counties: Cherry, Keyapaha, Brown, Rock, Holt, Sheridan, Boyd.

Ninth District: Councilor: H. V. Smith, Kearney. Counties: Hall, Custer, Valley, Greeley, Sherman, Howard, Dawson, Buffalo, Grant, Hooker, Thomas, Blaine, Wheeler, Loup, Garfield.

Tenth District: Councilor: Charles W. Landgraf, Jr., Hastings. Counties: Gosper, Phelps, Adams, Furnas, Harlan, Webster, Kearney, Red Willow, Chase, Frontier, Dundy, Hitchcock.

Eleventh District: Councilor: Bruce F. Claussen, North Platte. Counties: Lincoln, Perkins, Keith, McPherson, Garden, Arthur, Logan, Deuel.

Twelfth District: Councilor: A. J. Alderman, Chadron. Counties: Scotts Bluff, Banner, Box Butte, Morrill, Kimball, Cheyenne, Sioux, Dawes.

NEBRASKA STATE MEDICAL ASSOCIATION
Council Districts and Component County Medical Societies

COMPONENT COUNTY SOCIETIES

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Antelope-Pierce	R. E. Kopp, Plainview	D. F. Johnston, Jr., Osmond
Boone	Roy Smith, Albion	Wm. Reardon, St. Edward
Box Butte	J. J. Ruffing, Hemingford	F. P. Sucgang, Alliance
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Cass	R. J. Dietz, Plattsmouth	G. D. Knosp, Elmwood
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Medicinews . . .

National health insurance and the APHA

The American Public Health Association has described S3 and HR22, the Congressional bills proposing a national system of health security, or national health insurance, as "meeting the needs of the nation," and has pledged full support of the proposals. The bills were introduced in the Senate and House of Representatives by Sen. Edward M. Kennedy (D., Mass.) and Rep. Martha W. Griffiths (D., Mich.), each with many co-sponsors.

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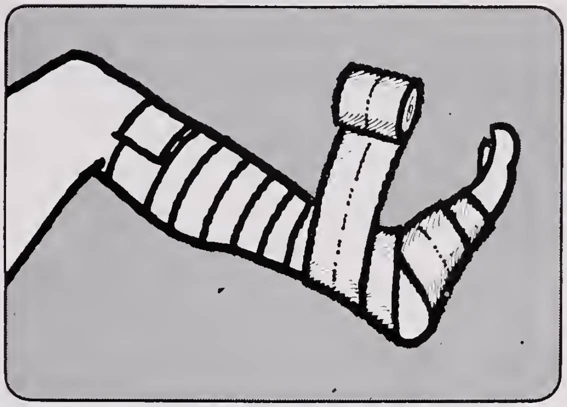

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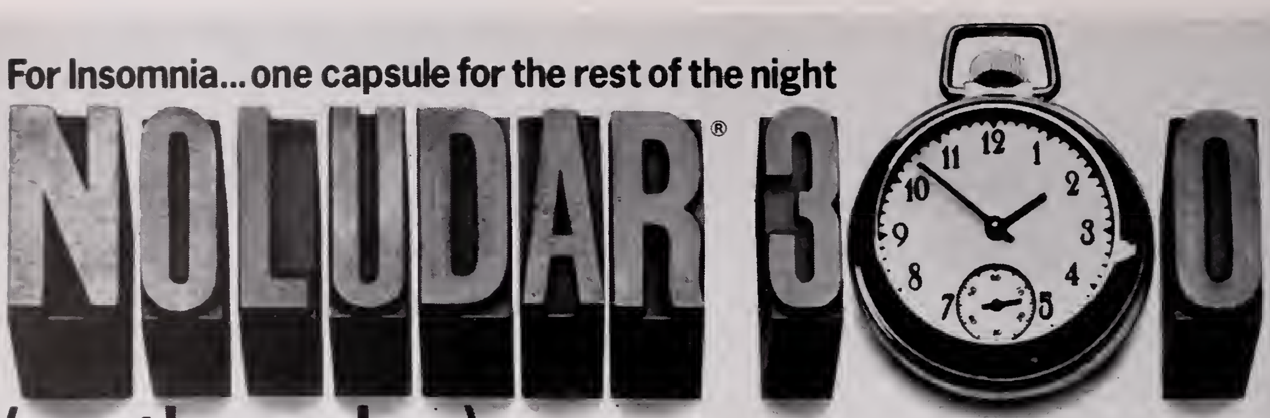

(methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

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sodium levothyroxine (T_4)
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[**] Clark, F., and Horn, D. B.: Assessment of thyroid function by the combined use of the serum protein-bound iodine and resin uptake of ^{131}I-triiodothyronine, J. Clin. Endocrinol. *25*:39 (Jan.) 1965.

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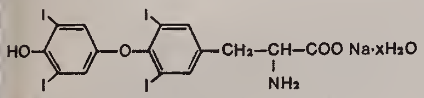
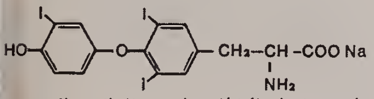
Euthroid is synthetic microcrystalline sodium levothyroxine (T_4) USP and synthetic microcrystalline sodium liothyronine (T_3) USP combined in a constant 4:1 ratio.



sodium levothyroxine (*l*-thyroxine) T_4



sodium liothyronine (*l*-triiodothyronine) T_3

Actions: Euthroid provides replacement therapy for the thyroactive material normally supplied by the human thyroid. The normal thyroid gland produces and stores thyroglobulin, the active components of which are two metabolically active hormones: *l*-thyroxine and liothyronine. Euthroid (liotrix) provides a combination of these hormones in purified, synthetic form, supplied in a constant 4:1 ratio in order to simulate as closely as possible the physiologic and metabolic effects of normal endogenous thyroid secretions.

In contrast with the individual synthetic, metabolically active hormones, Euthroid will usually produce normal results for PBI, T_3, and other thyroid function tests—consistent with clinical progress—when persons with endogenous thyroid deficiencies are made euthyroid. Sodium liothyronine (T_3) acts more rapidly and for a shorter period of time than preparations of biological origin. Customarily, its use as a single agent produces inappropriately decreased PBI values. Sodium levothyroxine (T_4), on the other hand, is more tightly bound by plasma protein fractions and is somewhat slower acting than sodium liothyronine (T_3); its use as a single agent tends to produce inappropriately elevated PBI values. Euthroid, with its unvarying 4:1 ratio of T_4/T_3, permits interpretation of appropriate laboratory tests consistent with the total clinical status of the patient.

Indications: Euthroid (liotrix) provides thyroid replacement therapy in all conditions of inadequate production of thyroid hormones, namely:

1) Hypothyroidism, including cretinism and myxedema.
2) Simple (nontoxic) goiter.
3) Subacute or chronic thyroiditis including Hashimoto's disease.
4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3, T_4, and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)		**Approximate Equivalents** **Natural**	**Synthetic**	
Tablet	T_4*/T_3** mcg	Thyroid USP	T_4*	T_3**
Euthroid-½ pale orange	(30/7.5)	½ grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

*T_4=sodium levothyroxine (*l*-thyroxine)

**T_3=sodium liothyronine (*l*-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: *Symptoms*—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

Supplied: Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

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THE NEBRASKA STATE MEDICAL JOURNAL

THE X-RAYS ARE INSIDE OUT

X-ray films and pictures are always set up so that the patient's right side is on the left side of the viewbox, journal page, and textbook. The heart appears on the observer's right, and the appendix, if you can find it, on his left. The effect is as though we were facing the patient, and this is probably the intent. But we are looking at a transparency or at a picture of zero thickness, and it makes no difference whether we pretend the patient is facing us or not.

I suggest that this strange custom of reversing sides is anachronistic, useless, and dangerous; I wonder how many lives have been lost because the left side was on the right. It is not too late to stop this nonsense. Let us put an end to this foolishness, and for the sake of clarity and sanity and in the name of safety, put the left side on the left so we'll all know what we're talking about.

Apart from dextrocardia, and I have never seen a case, the heart belongs on the left, and excepting for situs inversus, which I have yet to see, the appendix is on the right. East is east, and left is left; and right is right, and correct, too.

—F.C.

WHAT'S FOR DINNER?

We eat to satisfy hunger pangs and to replenish our store of essential substances in the body, including proteins, chemicals, and energy suppliers. We consume minerals, as salt, but that's hardly food; plants, as potatoes and spinach; and animals and animal products. A few of us are strict vegetarians, some include milk and eggs, and most humans are carnivorous, or flesh eaters.

Flesh means the softer tissues, especially muscle, and meat means flesh. You can't eat teeth or bones or ligaments, and ears and thyroid are of too little value. I'm an old meat and potato eater myself, and flesh eaters like me eat beef, chicken, and pork chiefly. Hunger or appetite has subdivisions, too: witness the gourmet, the mother force-feeding the unwilling child, and the dietitian prescribing a balanced diet. But *what* do we carnivores eat? Muscle chiefly, and the iliopsoas when I can get it. We eat liver and tripe and brains, and even lungs and spleen and kidneys. In other lands, fish heads float in the soup, and the eye is considered a delicacy; and here people eat the heart and the testis. And the tongue, and jowls, and the thymus, and the pancreas, and skin with our chicken, and pickled pigs' feet. And ox-tails and lobster-tails, and pig snouts and lips, and head cheese.

But nobody eats the uterus.

—F.C.

NAME DROPPERS

The old order changeth, wrote Alfred, and even Canute gave in. Eponyms make students learn two names for the same structure, they say, so they have been removed. But eponym erasers cannot hope to achieve total victory. For how else can you say pasteurized milk, or Dupuytren's contracture, or Osler's nodes, or Bence Jones protein?

What synonyms are there for Sippy diet, the circle of Willis, or the Austin Flint murmur? Please don't tell me the modern names of Hesselbach's triangle, or Valsalva's maneuver, or the space of Retzius. Let me see you change Wangensteen suction, Scarpa's fascia, and Bartholin cyst.

I'll cling to Bell's palsy, the Wasserman reaction, McMurray sign, and tetralogy of Fallot. Just try to forget McBurney's incision, Koplik's sopts, Scultetus bandage, and Trendelenburg's position.

I defy you to improve on Salk vaccine, Levin tube, and Cooper's ligament. Why remove such names as Henle's loop, Pavlov pouch, and the canal of Nuck? Leave Esmarch's tourniquet alone, and Curschmann's spirals, and the Cole tube, and Waldeyer's ring.

Don't forget: Parkinson saved us from having to say paralysis agitans.

Are there substitutes for Cheyne-Stokes respiration, or Osgood Schlatter disease, for Syme's amputation, and for Howell-Jolly bodies? I'll go right on saying Hutchinson's teeth, hydatid of Morgagni, and Nabothian follicles. Let name droppers play with Jackson's veil, the Fothergill operation, and Adams-Stokes syndrome.

Just try to forget the Gram stain, Erb's paralysis, the Aschheim-Zondek test, and Skene's gland. I hope they never remove Stenson's duct, or Broca's area, or the foramen of Magendie.

I see they still say Achilles tendon.

—F.C.

Postoperative Brachial Plexus Palsy — J. H. M. Kwaan and I. Rappaport (Dept of Surgery, Univ of California, Irvine 92664). Arch Surg 101:612-615 (Nov) 1970.

In a correlative anatomical and clinical study to define the contributing factor in postoperative brachial plexus palsy, tension recording along the brachial plexus was made on nine fresh cadavers by means of a spring gauge placed in series with the nerve plexus. Increasing nerve tension or stretch was observed with the arm in progressive abduction. In 39 patients affected by this neurological defect, as reported in the literature, hyperabduction of the arm was also noted in the majority of instances. Excessive nerve stretch is believed to be an important causal factor. Observations of brachial plexus tension with reference to various arm positions outlined in the study may serve as a guide in the prevention of this paralytic disability.

Surgical Management of Infections and Other Complications Resulting From Drug Abuse — D. D. Clark (Univ Hosp, Cleveland 44106). Arch Surg 101:619-623 (Nov) 1970.

The case histories of five patients are presented to illustrate the gamut of medical and surgical problems associated with drug addiction. Infected and abscessed injection sites are among the most frequent complications. Pulmonary, hepatic, and cardiac disease are also prevalent and must be considered in diagnosing and treating the addict. Most drug users are not addicted and do not require narcotic support while they are hospitalized. Methadone should be administered to the seriously debilitated addict in conjunction with intensive supportive therapy. Roentgenograms should be taken of an infected region to reveal the presence of gas or foreign body. Wide debridement, antitetanus prophylaxis, and appropriate antibiotic therapy using two broad-spectrum drugs should be instituted. Postoperative care in concert with the psychiatric and social service departments is mandatory if successful rehabilitation is to be expected.

Fatal Self Poisoning With Phenformin — J. P. Bingle, G. W. Storey, and J. M. Winter (County Hosp, York, England). Brit Med J 3:752-759 (Sept 26) 1970.

Death occurred 20 hours after self-poisoning with 1.5 gm phenformin. Neuroglycopenia was present and responded to dextrose. Severe acidosis did not improve after 1,250 mEq/liter bicarbonate and contributed to death. Neutrophil leukocytosis of 60,000/cu mm was present. The patient was a long-standing diabetic and was depressed. The most striking postmortem finding was erythema and bleeding throughout the gastrointestinal tract. Despite the gastrointestinal irritation a large proportion of the phenformin was absorbed; the blood contained 3μg/ml phenformin and the liver, 60μg/lm.

Mechanism of Sudden Death in Chlorpromazine Therapy — R. Cancro (Dept of Psychiatry, Univ of Connecticut, Hartford 06112) and R. Wilder). Amer J Psychiat 127:368-372 (Sept) 1970.

There has been an increasing number of sudden deaths in psychotic patients taking phenothiazines. The authors present a case report that they believe offers some insight into this problem. They feel that the combination of vasodilation with the hypotensive effects of phenothiazines might explain some of the unexpected deaths.

When to Perform Cardiac Catheterization In a Patient with Suspected Congenital Heart Disease

SPENCER B. KING, III, M.D.
and
FRED W. SCHOONMAKER, M.D.
Cardiovascular Laboratory,
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OVER one half of the children born with congenital heart disease will die before one year unless the correct diagnosis is made and the appropriate treatment is instituted.[1] When congenital heart disease is suspected because of a murmur, because of cyanosis or because of congestive heart failure, a tentative diagnosis may be made by paying close attention to the first four fingers of the diagnostic hand, i.e.: the history, the physical examination, the electrocardiogram, and the chest x-ray. Confirmation of the initial impression is required, however, and the best special studies are cardiac catheterization and cineangiography. These procedures not only establish a diagnosis, but accurately define the severity of a lesion and exclude commonly seen associated abnormalities which are often clinically unsuspected. These techniques are also used when the presence of congenital heart disease is suspected on the basis of nondiagnostic signs and symptoms. In addition, cardiac catheterization is quite valuable in evaluating the completeness of surgical repair. We would like to review the specific indications for catheterization.

The cyanotic newborn should be catheterized if heart disease cannot be ruled out as a cause of the cyanosis. Though cyanosis may be a sign of pulmonary, central nervous system, or metabolic disease, these problems may often be identified by close and repeated observation. When cyanosis secondary to heart disease is suspected, catheter studies should not be delayed. The reasons are threefold: First, the cyanotic infant will seldom get better if the study is postponed, and indeed will usually get worse. Next, early catheterization may prevent the necessity of emergency catheterization at a time when marked polycythemia, hypoxia and/or acidosis would make the procedure itself risky. And finally, in the transpositions and in the case of tricuspid atresia with a small atrial communication, enlargement of the atrial septal defect by balloon septostomy at the time of catheterization may produce marked hemodynamic and clinical improvement. Cardiac catheterization allows patients with severe tetralogy of Fallot or pulmonary atresia to be identified early in the course of their disease. The technical feasibility of systemic to pulmonary shunt procedures can be evaluated at the same time. Some patients will develop cyanosis later in childhood. Although most of them will have tetralogy of Fallot, catheterization should be done when these children are first identified, in order to make the diagnosis and to rule out other lesions. Cyanosis that develops in a child with a murmur may be an ominous sign that shunt reversal has occurred due to pulmonary hypertension.

In infants, signs of tachypnea, tachycardia, poor feeding, costal retractions, hepatomegaly, and diaphoresis should suggest congestive heart failure.[2] In the first week of life, this is most often caused by some form of hypoplastic left heart. After the neonatal period, other congenital diseases may be responsible: coarctation of the aorta, transposition of the great vessels, fibroelastosis, ventricular septal defect, patent ductus arteriosus, atrioventricular canal, or total anomalous pulmonary venous return.[3, 4] Virtually all children with congestive heart failure should be catheterized in the hope of finding a surgically correctable lesion — the exception, of course, being the child with acute rheumatic fever.

Congestive heart failure can often be improved prior to catheterization by medical management — again, if the patient does not respond well, prompt catheterization and subsequent surgical intervention may be indicated. In the infant, for example, pulmonary banding (in the case of a left to right shunt), resection of a coarctation, or ligation of a patent ductus may be recommended after the diagnosis is established by catheter studies.

In the child with a clinically suspected left to right shunt who is not in failure, catheterization can usually be postponed until an age when surgical repair is planned — this surgery is usually done just prior to entering school in the case of an atrial septal defect, a patent ductus arteriosus, or a relatively large ventricular septal defect.[5] It should be noted, however, that if the signs of significant pulmonary flow (such as a filling rumble) disappear, catheterization should be done at once to rule out the development of pulmonary hypertension. In the ventricular septal defects, early studies are often quite helpful in the management of a patient — a small VSD might close spontaneously and thus avoid an unnecessary operation. The size and severity of the lesion can be a guide in counseling the patient as to his activity at school or participation in athletics, and finally catheterization may reveal an unsuspected additional abnormality that might have caused surgical problems had its presence not been known.

Patients with pulmonic stenosis and obstructive outflow lesions should be catheterized prior to school because the lesions with highgrade obstruction will have to be operated. The patients with mildly stenotic valves can be assured that surgery will not be necessary. Patients with aortic stenosis are catheterized when symptomatic with angina, congestive heart failure or syncope, or when x-ray and ECG evidence of left ventricular hypertrophy appears. A bicuspid aortic valve is the most common cause of calcific aortic stenosis in adults, but again no studies are necessary unless signs and symptoms of left ventricular enlargement or overload are present.

Hypertension associated with a low amputude and delayed pulse with decreased blood pressure in the legs may point to the diagnosis of coarctation of the aorta. This lesion is best corrected at about 8 to 10 years, and catheterization can usually be deferred until then in asymptomatic patients. If hypertension is marked, however, or if congestive failure ensues, then catheterization and surgery may be needed earlier.

More than 25% of all children may have innocent or functional murmurs,[6] and catheterization obviously should not be done in all of them. These murmurs may include venous hums, supraclavicular arterial bruits, Still's murmur (a midsystolic, midprecordial, vibratory twanging sound), and some pulmonary ejection murmurs — particularly those of short duration, of low intensity, and not associated with an ejection click. Children with pectus excavatum and straight backs frequently tend to have the latter finding. Failure to recognize these murmurs as innocent may lead to the development of a cardiac neurosis with unnecessary restriction of the child's activity. When the clinician cannot give a clean bill of health to these patients because of atypical features of the murmur or because of a problematical clinical presentation, then cardiac catheterization may be quite helpful and even therapeutic.

In some patients with congenital disease, catheterization is sometimes not indicated. For example, extra studies in the patient with Eisenmenger's physiology are usually academic. Patients with a mild degree of pulmonary stenosis generally do not show progression of the stenosis[7] and repeated studies are unnecessary once the initial impression is confirmed. Small ventricular septal defects tend to get smaller and need not be restudied unless the clinical picture changes.

With the improvement in the technical aspects of catheterization and cineaniography, and with the very low morbidity now associated with these procedures, it can be safely said that there are no absolute contraindications to these studies. We would like to re-emphasize the importance of catheterizing all patients before surgical procedures are undertaken, not only to better define the lesions but also to identify occult abnormalities that might pose significant problems were they first discovered at the time of surgery.

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Viable Organ Procurement

PART II

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V. A Review of the "State of the Art"

Carrell and Lindbergh examined the possibility of in-vitro organ storage over thirty years ago.[58] Within the last ten years, a renewed interest in this problem resulted from the "apparent" break-throughs in organ transplantation. At this point in time, it is worthwhile examining why, after sacrificing thousands of animals and expenditures of hundreds of thousands of man hours and tens of millions of dollars, the present techniques of organ preservation are either of limited value, lacking in scientific merit, or lacking in technical feasibility.

In an area of study as broad as organ preservation, three elements share the responsibility for progress, or lack of progress: the individual researcher, the scientific community, and the funding agencies. Organ preservation research has been conducted primarily by academic surgeons. A team effort employing, for example, a surgeon, physiologist, biochemist and a biological engineer, is the exception rather than the rule.

Since organ preservation encompasses areas of knowledge spanning many traditional disciplines of basic medical and clinical sciences, exclusion of any appropriate discipline is self-defeating. Perhaps even more important in explaining the present slow rate of progress is the failure of many researchers to understand or utilize the "scientific method."

The scientific method describes the concept of stating hypothesis and proving (or disproving) it by appropriate experimentation. The experimental data in turn suggest a modification of the hypothesis which may involve an extension or an alteration of the original hypothesis. Each hypothesis suggests goal-oriented research; and, ideally, the reiterative process of hypothesis-data-hypothesis-data-etc., continues until the original objectives are fulfilled.

Formulation of the hypothesis and establishment of the appropriate experimentation are the two most important features of scientific discovery. Both require the ability to recognize and understand basic mechanisms and common properties. Training the clinical researcher to observe empirical trends and/or patterns does not automatically establish his ability in scientific discovery.

In lieu of research directed toward answering specific questions (posed by the hypothesis), typically, the "shot gun" experimental approach is employed. The shot gun approach characterizes experiments in which, for example, several dozen animals or more are utilized — five subjected to condition one, six to condition two and so forth, and finally, five animals serve as controls.

The several dozen animals utilized in this manner provide very little, if any, new scientific information. To narrow the scope of the experimentation, say be examining the effect of one experimental parameter, might provide definitive information on one specific question. By repeating this process, all questions can usually be resolved; however, a much greater expenditure of resources may be required. The shot gun approach rather than the scientific method is too often utilized both in science and engineering.

The medical scientific community as a whole must for two reasons share some of the responsibility for the present state of organ preservation. First of all, it is entirely possible that sufficient information suggesting the feasibility of storing organs (in some modes) is lacking. If a living organism cannot be maintained safely by a heart-lung machine for more than several hours, how can we expect to perfuse an organ for days? If we do not fully understand the information contained in a tissue preparative slide, then, how can we expect to employ histology as a means of assessing long-term effects of organ storage? If we do not have a good understanding of cellular metabolism, how can we expect that inhibition of metabolism to prolong storage durations will not result in cellular damage?

These are but a few examples of gaps of knowledge missing but necessary to ensure the goal of successful organ preservation. Organ storage is not the only area of investigation where such information is lacking.

The scientific community has never supported the concept of centralized or directed research, although they readily embrace centralized funding agencies. For major problems having high priority, centralized research should be employed more often since it is apparent that our resources are finite. The space effort by NASA is a good example of centralized research with specific goals, subgoals and information requested by one agency. If any area of major research is deemed worthwhile (e.g., established as a national goal), then all interested individuals and groups should determine the long-term plan or plans of study, periodically review the results, and, suggest changes that would ensure ultimate accomplishment of the proposed research goals. This concept would not stifle the individual effort, in fact, it would enhance the individual effectiveness.

The funding agencies also share the responsibility for progress of supported research; and, apparently are satisfied with the rate of progress in this field. Since they do not specify the experimental objectives and conditions, the researcher is free to choose both. What results is a lack of systematic investigation of any variable or combination of organ storage variables. It becomes difficult to pool information from reports of various researchers and very little specific knowledge results. There also tends to be a lack of universal agreement and sometimes even mutual distrust. At the very least, agencies should reject those proposals suggesting quick solutions in lieu of long-term goals.

VI. Conclusions

Organ storage research is being conducted along several lines of approach. Attention is presently being directed toward the more general aspects of viable organ procurement. If procurement systems prove to be both economically and technically feasible, then sufficient direction should be focused upon improving the quality or organ preservation. The latter must conform with acceptable moral, religious, social and medical standards. If not possible, the research funds and talents should be redirected.

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Cardiomyopathies*

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CARDIOMYOPATHIES are a group of disorders in which there is progressive deterioration of myocardial function without significant coronary artery disease, systemic arterial hypertension, rheumatic valvulitis, or infectious endocarditis. This group contains some of the least well understood diseases which involve the heart.

The myocardial diseases are usually divided into two classifications: 1. The idiopathic cardiomyopathies, and 2. The secondary cardiomyopathies. The latter group is made up of systemic diseases which involve the heart as part of a recognized disease process, such as scleroderma, amyloidosis, sarcoidosis, systemic lupus, Friedreich's ataxia, progressive muscular dystrophy, myotonia atrophica, hemachromatosis, and glycogen storage disease to name a few.

The idiopathic cardiomyopathies comprise an ill-defined group of poorly classified diseases, some of which are familial. The non-familial group is composed of alcoholic cardiomyopathy, post-partum cardiomyopathy, hypertrophic subaortic stenosis and idiopathic cardiac hypertrophy. In the bulk of patients with idiopathic cardiomyopathy, the etiology is obscure.

The patient with cardiomyopathy will often present with either the symptoms of his underlying disease (in secondary cardiomyopathies) or with angina, syncope or congestive heart failure. On occasion the asymptomatic patient is detected because chest x-ray reveals an unexplained large heart or routine electrocardiogram reveals an unexpected conduction disturbance or other QRS-T abnormality. The basic differential diagnosis must always include coronary artery disease and rheumatic heart disease. Patients with cardiomyopathy and marked cardiomegaly frequently have the murmur of mitral insufficiency; the differentiation between primary valvular disease and primary myocardial disease resulting in valvular deformity is sometimes difficult. It is most advisable that cardiac catheterization and coronary arteriography be carried out in all patients suspected of cardiomyopathy, since coronary artery disease may present without chest pain. Thus, the patient who appears to have cardiomegaly and congestive heart failure due to cardiomyopathy, may actually have severe coronary artery disease (with or without ventricular aneurysm) and may be a candidate for surgical therapy.

The treatment of patients with cardiomyopathy is directed toward relief of the symptoms of the underlying disease and toward management of the congestive heart failure. Relief of left ventricular outflow tract obstruction, if present, is indicated. The heart failure in this group of patients is frequently severe and difficult to control. Digitalis, diuretics and a salt free diet remain the mainstays of therapy. Patients with cardiomyopathy frequently accumulate extraordinary amounts of edema fluid and the temptation to produce rapid diuresis in the newly discovered patient may lead to large potassium losses and digitalis intoxication.

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Three areas of therapy are controversial and require special consideration. There is some evidence to suggest that prolonged bedrest with severely restricted activity is of value. Secondly, steroid therapy is often advocated in the use of cardiomyopathy. Lastly, anticoagulation has been recommended as sound preventive therapy for people with primary myocardial disease. The rationale underlying the recommendations for anticoagulation stems from the frequency of pulmonary and systemic embolism in these patients.

In summary, the primary myocardial diseases present a broad array of pathologic processes directly involving the myocardium. A small number of patients with this disorder are affected with a systemic disease which, also involves the heart. The greater number are affected by an idiopathic form of cardiomyopathy. Most patients in whom this diagnosis is entertained should undergo cardiac catheterization to rule out the possibility of a specifically treatable form of heart disease. In the absence of specific therapy, digitalis, diuretics and salt restriction remain the most useful forms of treatment of the heart failure, which invariably accompanies these disorders at sometime in their course. There is no convincing evidence at this time that prolonged bedrest, steroids, or anticoagulants alter the course of these diseases.

Hemostasis —

I. Current Concepts of Hemostasis As Related to the Diagnosis Of Bleeding Disorders

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NORMAL hemostasis depends upon: (1) The integrity of blood vessels, (2) the presence of normal platelets in adequate numbers to prevent bleeding, and (3) the presence of a normal coagulation system.[1, 2] In recent years great advances in our understanding of the hemostatic mechanism have been made, not only because of the need to control hemorrhagic diatheses, but because of problems related to thrombosis. This discussion is presented as a brief review of the physiologic manner in which bleeding is prevented, and to show how the family physician can arrive at a presumptive diagnosis of hemorrhagic problems.

Subtle changes in blood vessels themselves may lead to abnormal bleeding but do not readily lend themselves to experimental inquiry. Senile purpura, for example, may be related to abnormal support function of collagen in elderly persons. Certain other disorders associated with purpura, such as scurvy and Ehlers Danlos syndrome, formerly believed to be related to connective tissue abnormalities, are now known to be associated at least in part with platelet functional abnormalities.[3, 4] More obviously, vascular spasm serves to decrease the rate of bleeding immediately after vascular injury.

Adhesion of blood platelets to collagen fibers, and platelet aggregation are fundamental means by which bleeding is controlled initially.[5] Platelet aggregation is primarily mediated by the nucleotide adenosine diphosphate. It is known that platelets adhere to the site of injury within a matter of seconds after vascular injury, and then clump together to form a platelet plug. These responses initially seem to be independent of the presence of thrombin, but thrombin generation occurs soon after vessel injury, and serves to stabilize the platelet plug as fibrin is formed.

For the practicing physician, perhaps the most confusing aspect of hemostasis has been an understanding of the blood coagulation mechanism itself, which has undergone numerous revisions in the past 70 years, and remains under intensive study. Our concepts about coagulation may undergo further change, but at present the "cascade"[6] (Macfarlane) or "waterfall"[7] (Ratnoff) concept seems to agree well with clinical and laboratory observations. There are many potentiating reactions during blood coagulation (e.g. thrombin induced activation of antihemophilic factor) but the basic intravascular sequence can be depicted simply as the portion of Figure 1 designated as "intrinsic." This term indicates that the constituents required for fibrin formation in this pathway are present in circulating blood, requiring only an appropriate stimulus to initiate coagulation. Once the sequence has begun by activation of factor XII (Hageman factor), it proceeds by sequential activation of clotting factors which are present in plasma in an inactive state, with the final generation of thrombin, and fibrin formation. Certain of the activation steps involve active proteolysis, e.g., factor X (Stuart-Prower) has a molecular weight of 87,000 prior to activation, while the activated form has a molecular weight of 24,000. The order of activation is thought to be: XII, XI, IX, VIII, and X, as noted in Figure 1. Those factors together with factors V, II, and I are measured by the partial thromboplastin time. The importance of the "intrinsic" path is illustrated by the bleeding tendency of severe hemophilia, whether due to factor VIII or factor IX deficiency. Factor VII (stable factor,

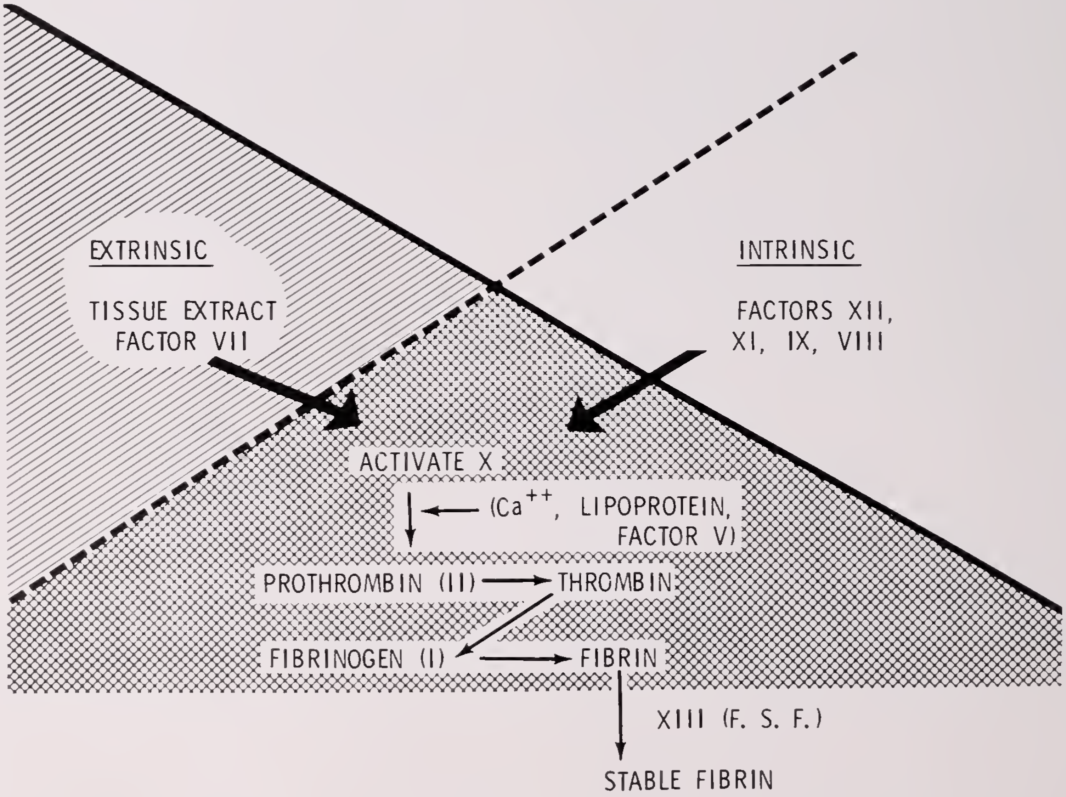

Figure 1. Schematic representation of the current concept of blood coagulation. The "intrinsic" pathway is represented to the right of the hatched line, the "extrinsic" to the left of the solid line. Coagulation factors in the "intrinsic" pathway (XII, XI, IX, VIII, X, V, II, I) affect the partial thromboplastin time, those in the "extrinsic" path (VII, X, V, II, I) affect the one stage prothrombin time. Both tests are affected by coagulation factors in the double hatched area (X, V, II, I). Factor XIII deficiency does not prolong either the one stage prothrombin time, or the partial thromboplastin time.

proconvertin) affects the "extrinsic" system, which is activated after tissue damage supplies a phospholipid material which accelerates coagulation ("tissue factor"). The *in vitro* counterpart of extrinsic clotting is the one stage prothrombin time developed by Quick, in which rabbit brain supplies tissue factor activity. *In vivo,* both paths of coagulation are active following injury.

As noted in Figure 1, the one stage prothrombin time measures factors VII, X, V, II (prothrombin), and I (fibrinogen). Fibrin molecules finally are stabilized by the formation of covalent bonds after activation of factor XIII (fibrin stabilizing factor).

In adults with congenital disorders, a history of abnormal bleeding in family members may be obtained. Classic hemophilia (factor VIII or AHF deficiency) and Christmas disease (factor IX deficiency) are well known to appear in males, while women are carriers. Conversely, von Willebrand's disease has an autosomal dominant inheritance and may appear in successive generations in either sex. Other congenital coagulation deficiencies are quite rare, and are primarily transmitted in an autosomal recessive fashion; either sex may be affected, and a history of consanguinity may be obtained. If the patient has an acquired bleeding disorder, more reliance may have to be placed on laboratory testing to define the nature and severity of the defect. Nevertheless, the patient's response to injury is the best test of hemostatic function. To be meaningful, historical inquiry should be made of the nature of the trauma causing bleeding, and to learn if bleeding occurs with each traumatic episode of equal severity. A history of protracted bleeding following tooth extraction, minor cuts, or operations may be particularly helpful. Spontaneous bleeding may occur, and if arising from mucosal surfaces is frequently associated with platelet defects. Hemarthrosis, on the other hand, is essentially unknown in association with platelet defects. If the patient is mildly affected, the bleeding tendency may be suspected only by eliciting the history with great care. Such patients may be operated upon and have excessive hemorrhage, however. Despite the risks of unsuspected bleeding at operation, historical information remains the best screening evaluation in the opinion of most hematologists. "Routine" bleeding and clotting times may give a false sense of security and as screening procedures are to be condemned.[8]

In examining the patient, one should note particularly whether hemarthroses are present, whether there is evidence of deep tissue hemorrhage, whether petechiae and/or ecchymoses are present, as well as whether there is lymphadenopathy, hepatomegaly, or splenomegaly. Petechiae are most commonly related to thrombocytopenia. When the platelet count is known to be low, a bleeding time should be avoided, since hemostasis may be difficult to achieve, and the bleeding time can almost always be assumed to be abnormal.

To study a hemorrhagic diathesis, the physician can rely on certain basic procedures which are widely available, and which include the platelet count, bleeding time, prothrombin time, partial thromboplastin time, and fibrinogen concentration. As noted, the Lee White coagulation time is insensitive and is not recommended for diagnostic purposes. The tourniquet test may be similarly misleading.

Referring again to Figure 1, it is clear that initial delineation of single clotting factor deficiencies may be obtained in part from the partial thromboplastin time (PTT) and prothrombin time (PT). Thus a deficiency of factor VII will prolong the PT but not the PTT, and deficiencies of factor VIII, IX, XI, or XII will prolong the PTT but not the PT. Deficiencies of fibrinogen, prothrombin, factors V and X will prolong both the PTT and PT. Multiple deficiencies such as occur in hepatic disease, and in disseminated intravascular coagulation may also prolong both the PT and PTT. Conversely, neither the PT nor PTT is prolonged by platelet defects or by factor XIII deficiency. The thrombin time deserves special mention since the test is easy to perform and merits more widespread use. The thrombin time is prolonged in hypofibrinoginemia and in the presence of heparin and/or fibrin split products. If a heparin-like anticoagulant is present in plasma, both the prothrombin time and PTT may be prolonged. If a thrombin time is not performed, then multiple factor deficiencies may erroneously be assumed to be present. Each of these tests requires adequate standardization and daily control to be meaningful, and the reader should consult any of several standard text books for technical details.[1] It should also be emphasized that the sensitivity of these tests to various deficiency states varies, and elevated levels of one coagulation factor may mask a low level of another factor measured by the partial thromboplastin time.[9]

If the platelet count, PT, and PTT are normal and the patient has a history or evidence of clinical bleeding, then platelet or vascular dysfunction, or factor XIII deficiency should be considered. Abnormal vascular function, seen clinically in anaphylactoid purpura, viral illness, and in elderly persons, is chiefly manifested by petechiae or ecchymoses, and investigation may have to be limited to exclusion of other causes of bleeding which are subject to replacement therapy. A long bleeding time with a normal platelet count, PT, and PTT, is presumptive evidence of a platelet or capillary functional abnormality. The commonest cause of abnormal platelet function is that produced by aspirin, for platelet function is known to be abnormal for about a week after the ingestion of 300 mg of aspirin.[10] Aspirin does not usually cause a bleeding tendency in normal persons, but does prolong the bleeding time in normal persons[11] and in hemophiliacs.[12] Patients with congenital abnormalities of platelet function (von Willebrand's disease, Glanzman's thrombasthenia, thrombocytopathy, and thrombopathia) also may have a long bleeding time, although the bleeding time is variable in von Willebrand's disease. With the exception of von Willebrand's disease, these disorders of platelet function are quite rare, and such patients should be studied in a specialized coagulation laboratory. The final proof of deficiency states may have to depend on assays of specific coagulation factors or specialized study of platelet function.

Unexpected obstetrical or surgical bleeding may result from several clinical problems, ranging from concealed accidental hemorrhage to the development of disseminated intravascular coagulation or unsuspected hemophilia. The problem is not so much that of deciding between a wide variety of possible causes as to make a rapid diagnosis of the suspected disorder so as to institute effective therapy without delay. An estimate of platelet numbers can be made quickly from a slide of peripheral blood. The concentration and reactivity of fibrinogen is of particular importance, but conventional biochemical assays of fibrinogen may be too time-consuming to be of practical value, and may give inaccurate results in the presence of fibrinolytic activity. If the thrombin time is prolonged, the patient's plasma should be mixed with normal plasma. If the thrombin time remains prolonged, heparin-like anticoagulants and/or fibrinogen split products can be presumed to be present. If the patient is deficient in fibrinogen, the thrombin time will be normalized by the mixing experiment. If a plasma clot disappears in less than an hour, it suggests that fibrinolysis is present; however, the practice of observing a blood clot at room temperature for 24 hours may not reveal fibrinolytic activity, which may be manifest only at 37°. If the initial tests reveal no abnormalities, then marked thrombocytopenia, fibrinolytic activity, and disseminated intravascular coagulation are unlikely, and one can proceed with further hemostatic evaluation as indicated.

Summary

Our current understanding of normal hemostasis has been reviewed, and related to the diagnosis of bleeding tendencies. From the patient's history, physical findings and laboratory values the majority of bleeding defects can be satisfactorily evaluated, and the clinician can then adopt a rational approach to the therapy of hemostatic problems.

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Address by The Honorable Robert H. Finch Counsellor to the President[*]

IT is a genuine privilege to be asked to take part in this multi-State assemblage of health professionals and concerned citizens — whose endless labor and generous support make it possible for institutions like the Bishop Clarkson Memorial Hospital to exist, and to serve.

Although my official tenure as Secretary of Health, Education, and Welfare ended just two days ago, that represents no turning away on my part from HEW's agenda. As Counsellor to the President, I will be dealing with essentially the same priority list — against the broader canvas of our entire postwar domestic agenda.

All the initiatives that were put in motion during the seventeen months of my stewardship at HEW — aimed at imposing a sense of order, and clear lines of interaction, upon the incredible panoply of programs that were rushed into law during the decade of the '60s — this far-reaching process will continue into the '70s and beyond.

And, under the superbly qualified leadership of Elliot Richardson, I believe we will begin to see dramatic results of what we have begun all across the spectrum — programs that draw health, education, and social services into one focus . . . programs that *work*, that really reach their intended targets.

Partly by the chance of time, and in major part by deliberate choice, we find ourselves committed to a process of fundamental change and renewal — one that affects literally every major institution in our society, both public and private. Problems simply no longer present themselves in tidy packages, stamped with the same old labels. Traditional boundaries are fading away . . . between health and education, between education and human welfare.

And, in a further and critically important dimension, the separation between the public and private sectors is also breaking down. The antagonistic, adversary relationship of the early '30s is giving way to a new concept of partnership and shared responsibility — and nowhere is this immensely promising development more desirable or, indeed, essential than in the area that is our particular concern today . . . that of health care.

Certainly, all of you here at Bishop Clarkson know what it is I'm attempting to say — you know it from your own experience in planning and guiding the evolution of this magnificent medical complex. Your Hospital, of course, is pre-eminently dedicated to patient care, as it has been for a century. Your staff embraces nearly every current medical specialty. With the completion of the second of your "twin towers," the Hospital's patient capability has been just about doubled.

Yet, this is only the start. Your School of Nursing . . . your joint internship program with the University of Nebraska Medical Center . . . your allied specialty institutions . . . your several programs of continuing education — this very Storz Pavilion which provides such convenient and luxurious meetings facilities — all this adds up to your commitment to health care as a total entity. And I know that each aspect of the Center's work — in patient care, research, and teaching — enhances and enriches all the others. In the vernacular of the day, it's all "one bag."

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[*] Presented at the Bishop Clarkson Memorial Hospital Medical Symposium, Omaha, Nebraska, June 26, 1970.

So, in all these ways, this Hospital and medical complex is attempting to be part of the *solution* — because you grasp the nature of the *problem* so well. In its full dimension, the problem we all must contend with has to be termed a national health-care crisis — and it is beyond the reach of any one institution, or any one community, State, or region. It is beyond the unaided capability of any single component of the health industry or, indeed, of government at any level.

I think it is genuinely encouraging that almost everyone now agrees about the parameters of this health-care crisis — what it is and, just as important, what it is not.

It is *not* a crisis of quality. Considered one by one, the components of our health-care systems are of true excellence . . . incomparable the world over. This estimation applies, I believe, with respect to biomedical research . . . an ever growing shelf of wonder drugs . . . the skills of our health professionals . . . the evolving technology of medical science . . . and, surely not least, to the excellence of our medical, dental, and nursing schools, and our hospitals and clinics.

We possess every element of matchless quality in our health-care delivery systems — *except the delivery systems themselves.* The basic capabilities exist — but they are scattered, fragmented, and uncoordinated. We focus too much on remedial illness management — and not enough on fostering human health.

We Americans spend more dollars and a greater proportion of our total national wealth on health care than any other Nation in the world — but millions of our citizens have virtually no access to any health services worth the name. In some areas of the country, the screening of Job Corps applicants — most of them inner-city, minority-groups — revealed that up to 70 per cent had not seen a doctor since early childhood . . . and that 90 per cent had *never* seen a dentist.

In suburban areas today, the doctor-patient ratio runs about 1-to-500; in the inner city, it is 1-to-10,000 — or worse. Nor is the problem limited to the inner city. In some 115 rural counties, scattered over 23 States, a total population of some half-a-million persons lacks a single M.D. in patient care. The problem is not one of poverty either. Many of these rural counties are relatively prosperous — but they lack the variety of challenges to attract young doctors, nearly 80 per cent of whom are now entering the specialties, and many of whom seek the added stimulation of parallel careers in teaching and research.

Health professionals are in critically short supply, and the situation would be even worse were it not for the systematic "reverse brain drain" whereby this affluent, advanced Nation makes up for *its* shortages by utilizing foreign-trained doctors. One of every six doctors now in U.S. practice falls into this category — and dozens of our hospitals would be literally stripped of interns and residents without this reservoir of the foreign-trained.

Health-care facilities, too, are unevenly distributed — often in the wrong places, offering primarily acute-care services. And they are of uneven quality. Our best estimates show that revitalizing hospitals in the inner city would cost at least $6 billion. And even an expenditure of this magnitude would fail to buy the primary-care, early- and extended-care facilities to which millions of Americans — of every race, class, and condition — almost wholly lack ready access.

On top of all these factors has been added a vast upsurge in public demand for health services . . . fueled by abundance, and bankrolled in growing part by the Federal Government. The Federal health budget — now edging up to 20 billions of dollars a year — exceeds the Nation's *total* health outlay of only 15 years ago. It accounts for better than 35 per cent of the national health budget.

And 75 per cent of these expenditures — about $14 billion last year — are simply money-tickets. They represent hundreds of millions simply disgorged into our existing health-care systems, with no adequate provision for matching the supply of resources against mounting demand . . . or for standards affecting quality of care.

The Medicare program was enacted in 1965, with Medicaid just as an afterthought, and already their combined costs are running at twice original projections. They held out promises that simply could not be met — with available manpower and facilities.

In this perspective, if Congress instituted some scheme of national health insurance tomorrow — predictably it would produce utter chaos. It would invite the emergence of two health-care systems, separate and unequal — one for the rich . . . another for the poor.

Add all these circumstances together, and the results are apparent to all of us. Medical cost inflation is running at more than double the rate of increase in the overall cost-of-living index — although, let me note, this is no longer true where doctors' fees are concerned. In the last year, these have been held at just about the overall rate — and substantially less under Medicare.

The average citizen is doubly squeezed — in the form of higher taxes, and higher bills for the medical services he buys in the open market. Our insurance systems encourage the overutilization of highest-cost facilities. Doctors are overburdened — 70-hour work weeks on the average — and often their time and skills are wasted on jobs that supporting auxiliaries might better perform.

What, then, can be done about it? As the world's biggest purchaser of health services, the Federal Government has a particular obligation . . . to encourage and assist in the evolution of a more effective, more responsive health-care system. And so do all of you in the health professions. It will be a long, arduous process. But we must start now — as, in fact, the process *has* started.

I cannot possibly touch on every initiative now under way. Earlier this week, for example, Dr. Bornemeier called for a shift in priorities, from the specialties to primary, family care. And he urged that the time-frame for medical education be cut back — to six years if possible. These are both essential reform proposals.

There are also new developments in group and team settings . . . in prepaid health programs . . . and a growing concern among insurance carriers for the quality of health-care, and not just the paying of medical bills. Our overburdened medical schools are determined to increase enrollments . . . with the help, I might note, of HEW's Physicians Augmentation Program . . . and compress the duration of the educational process.

I could also discuss HEW's ongoing efforts to implement effective cost and utilization controls on Medicare — really for the first time since the program's start. Early next year, we will propose a complete reform of Medicaid and, already, there have been important initiatives to encourage State and regional health planning. The Hill-Burton program must be retargeted toward the facilities in critically short supply — community health centers and early-care facilities — and this was the reason for the President's rejection of the three-year Hill-Burton extension recently enacted by Congress.

Rather than run down the entire checklist, let me illustrate all these new thrusts by reference to just two broad concepts — one, our recent proposal for health maintenance options, and the other in the area of manpower development and utilization . . . all across the health-care spectrum.

We have asked for the authority under Medicare to enter into *health maintenance contracts* — with hospitals, medical societies, groups of doctors, insurance carriers, or major corporations — which would guarantee across-the-board health services at a fixed annual rate for each person served. The unit-cost would have to be less than the present costs of Part A and Part B services combined.

The interests of all parties would be the same — to prevent illness in the first place, through periodic examinations and immunizations . . . to treat unavoidable illness early . . . to avoid unnecessary hospitalization . . . and to secure a full range of health services from a single source in a coordinated, efficient manner.

There would have to be competing options in any given area — and, always, the individual would remain free to continue the present practice of shopping for his own medical services. Every contractor would have to serve high medical risks as well as the healthy — and none would be given an exclusive franchise to serve only Medicare patients. And the most stringent safeguards would also be required — to maintain quality of service, and to guarantee really free and informed consumer choice.

This concept, in fact, represents no wholly new departure. More than 5 million Americans already receive medical care under arrangements based on incentives to keep patients healthy, and out of the hospital. HMO's, so-called, would simply enhance and extend this concept.

We realize that the barriers are many and formidable. Some States flatly prohibit the practice of medicine in this fashion. Quality controls would be no easy matter. But we are convinced that this is a direction that must be explored — in close partnership with the health professions, and with existing providers of health services.

Essential to our thinking is that we must begin to deal with the health industry as one whole . . . with quality results the target. We would be concerned with the delivery of a guaranteed package of health benefits, and assurances that every HMO could indeed supply such a product. Within the contract price, savings through efficiency would accrue to the organization . . . and to the consumer.

That is one concept that I offer for your consideration. Another, with respect to *manpower training and utilization*, is really closely tied — because it is virtually inconceivable that we will ever be able to resolve the crisis we face *simply* within the framework of the solo practitioner. Manpower shortages are too severe, and the capabilities of existing educational resources are too limited. If that were the only available option, we would be locked into a perpetual and futile game of "catch up" ball.

But already new trends are evolving that promise better utilization of the health manpower we do have . . . and its greatly increased productivity. And all these new trends — first steps, really, in the direction of health maintenance organizations — involve one element in common. That is the supporting health aide . . . the paraprofessional auxiliary.

They are urgently needed in greater numbers, and in newly-developing disciplines. And we must help create the contexts within which their skills can extend the doctor's, dentist's, and surgeon's expertise . . . and thus free him from time-consuming, lower-skill activities. In preliminary patient screening and testing, in laboratory and radiological work, in certain simple medical procedures — in all these supporting activities, the paraprofessional is crucial to the evolution of a coordinated, effective health-care delivery system.

And so all our plans for two-year community colleges and career education include as a key component the training of paraprofessional health aides and technicians. HEW is working in a dozen pilot projects with medical societies and medical schools to train returning Vietnam medics for health careers. And the early results are genuinely promising.

In order to make full use of paraprofessionals, there is an allied problem we have to tackle — and that is the significant growth of malpractice claims, and their impact on our health-care systems. The problem reaches well beyond the legal risks in utilizing paramedical personnel, of course. Sharply increasing malpractice insurance premiums surely have a deterrent effect on new entrants into patient-care general practice, and on the willingness of high-risk specialists to employ experimental techniques.

No one disagrees that the victims of professional negligence must be protected. But also we cannot ignore the human relations problem — the physician-patient rapport — that is involved in the trend toward greater medical specialization. We expect our current studies to show a direct *and inverse* relationship between time spent with a patient and the incidence of malpractice litigation. And this profoundly affects the evolution of new templates of health care.

We designated HEW's first special assistant for malpractice research and prevention early this year. We now are attempting to map out the full dimensions of this urgent problem. And, we are exploring, with both the health and legal professions, various legal and administrative alternatives to the present tort liability and contingent-fee approach to malpractice compensation.

Reflecting on all that I have been saying here today, it occurs to me again that our areas of agreement surely are great . . . and growing. The same basic impulse motivates all of us.

We all want our health-care systems to work. We want them to work in behalf of all Americans. And we want to preserve the bulwark of our present strength — a plurality of independent and interacting health-care components. We all are trustees in common — dedicated to results, to quality, and to service.

And it is certain that the promise of American life will never be complete so long as our expectations and our capabilities outrun our performance — our actual impact on human lives and well-being.

On balance, I am filled with optimism about the possibilities and the contributions of the medical arts and sciences in the decades ahead. It was Thomas Jefferson who once said, "I would rather dream of the future than read the history of the past."

And I am compelled to recall that preference whenever I read or hear of advances in medical technology . . . in patient care . . . in the development of some new life-saving drug . . . in the outreach of all the healing arts — indeed, whenever I see the short distance remaining, compared to all that has been covered, to fulfill the dream of quality health care for all Americans.

At all such moments, I share the hopes once expressed by Arnold Toynbee in this grand prediction:

> The twentieth century will be chiefly remembered, not as an age of political conflicts and technical inventions, but as an age in which human society dared to think of the health of the whole human race as a practical objective.

And that, my friends, is the objective we all share.

Obstructive Intramural Hematoma of Jejunum: An Unusual Manifestation Of a Seat Belt Injury

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BLUNT trauma to the upper abdomen may cause an intramural hematoma of the alimentary tract resulting in occlusion of the bowel lumen by an expanding extravasated collection of blood in the subserosa or interstitial tissue. This is an unusual mechanism of high intestinal obstruction which occurs predominantely in young male children. Until 1966,[1] less than 75 cases of symptomatic duodenal hematoma were recorded in the literature. Most cases are reportedly the result of a blow from a blunt object with rare mention of seat belts. We are unaware of any previous report of intramural jejunal hematoma due to seat belt injury.

Case Report

The patient is a 12 year old female who was involved in an automobile accident. She was seated in the back seat with her seat belt placed over her upper abdomen. She presented to the emergency room with back pain over her upper lumbar and lower thoracic vertebra with ecchymosis, swelling, and tenderness in this area. There was a seat belt mark over her upper abdomen. No abdominal mass was palpated and there was no abdominal tenderness. X-ray films revealed minimal compression fractures of L-1 and L-2.

Her first complaints of severe lower abdominal cramping began 31 hours after admission. Two hours later, the cramping was severe and in her upper abdomen. Nausea and vomiting began 36 hours after admission. About this time, a left sided mass was palpated and thought to be a rectus abdominis hematoma. By 48 hours she was having projectile emesis without nausea. Her hemoglobin had dropped from an admission 13.3 gm% to 11.0 gm%. Her white blood count was 10,300 with a normal differential. She was afebrile with a pulse of 120.

The diagnosis of upper bowel obstruction with pancreatic injury or intramural hematoma of the duodenum as the etiology was pursued. Amylase values were normal. An upper gastrointestinal exam (Fig. 1) with barium was reported as showing a very large submucosal hematoma involving a loop of midjejunum with some dilation of jejunal loops proximal to the hematoma.

On the fourth hospital day, laparotomy revealed a large hematoma in the wall of the jejunum (Fig. 2) extending from the ligament of Treitz for about 8 inches. The hematoma was between muscle layers, and was very adherent to the inner layers of jejunal wall. It was removed through a transverse incision over the mass. Postoperative recovery was uneventful, with a brace being used to support her back.

The initial report of duodenal intramural hematoma is generally attributed to McLaughlin,[2] who described a "false aneurysm" of the duodenal wall in 1838. Since then, the majority of cases have been reported in the last century. The literature is devoted almost exclusively to duodenal or duodenal-jejunal hematomas, with rare mention of a pure jejunal hematoma.

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Etiology of the hematoma is a blow to the abdomen which exerts a shearing force on the retroperitoneally fixed duodenum. This tears the rich submucosal or subserosal vascular plexus without disrupting the mucosal and serosal coats. With increasing size, the hematoma may become bulky enough to obstruct the involved segment.

In most cases of traumatic intestinal hematoma the patient is a boy, probably because bicycle handlebars, football, kicks, blows, and assorted falls are hazards more of the male than of the female youngster's world. In a series of 24 intramural hematomas by Shaw,[3] the median age of the group was nine years. It is also of significance that in several cases the history of abdominal trauma was not elicited until postoperatively. Causes of intramural hematoma other than recreational include automobile accidents,[4] anticoagulant therapy,[5] and as a manifestation of the battered-child syndrome.[6]

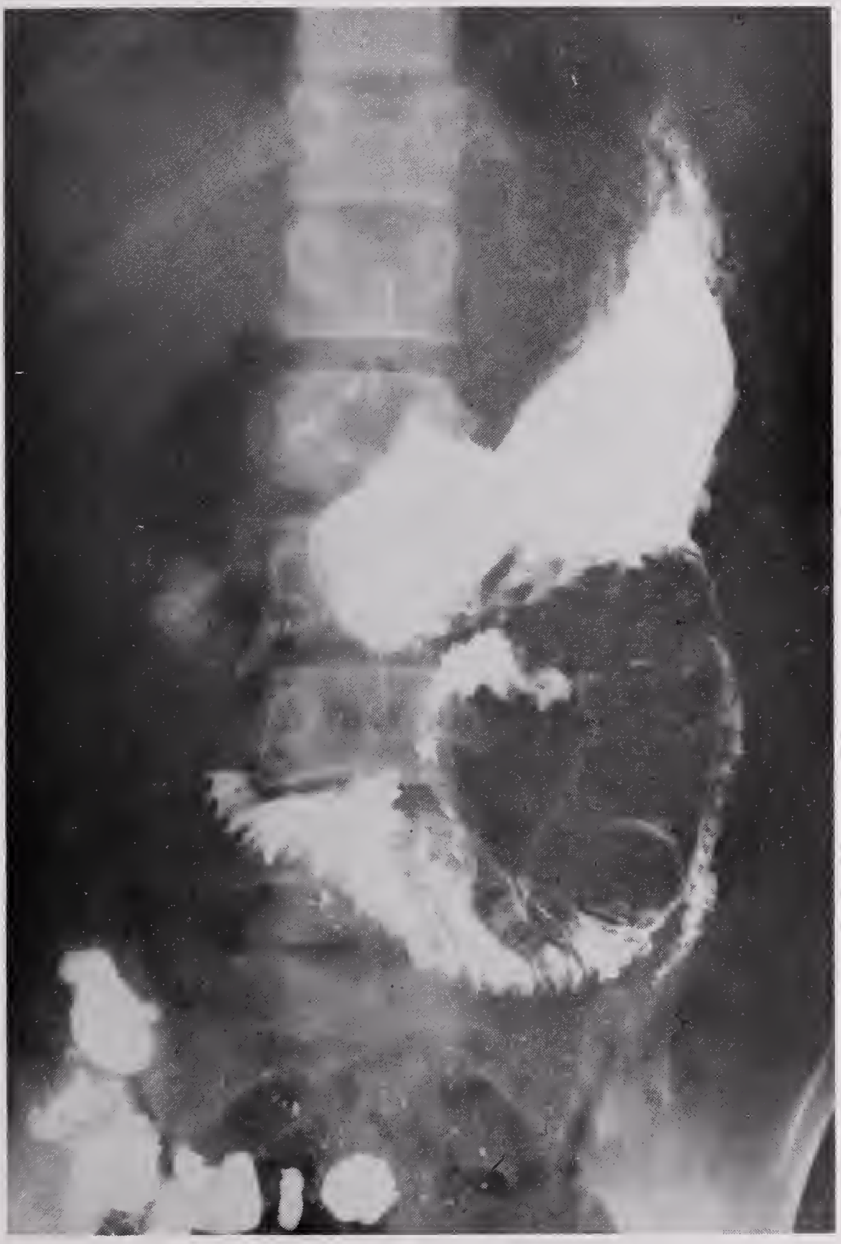

Figure 1. Gastrointestinal exam demonstrates a large filling defect in proximal jejunum.

With the two major symptoms of pain and vomiting, a good history, and a high index of suspicion, the diagnosis should be made preoperatively. The most common symptom encountered has been protracted vomiting of bile-stained material. Vomiting usually precedes or lags the onset of pain by 24 hours, both of which may lag the injury by several days. The pain may be unremitting or intermittent, excrutiating or insidious, and is usually diffuse in the mid or upper abdomen. A mass can be felt in about one fourth of the cases.[1, 3] The patient is usually afebrile, dehydrated, and has an elevated pulse.

Laboratory evaluations usually show a normal hemoglobin, mildly elevated white count, and appropriate amylase or bilirubin values if the pancreas or ampulla of Vater are involved. Plain films of the abdomen may suggest the diagnosis with evidence of gastric or duodenal distention, a soft tissue density with displacement of air containing loops of bowel, or obliteration of the right psoas shadow. A barium swallow will make a positive diagnosis with pathognomonic radiographic features[3] described as an intramural duodenal mass with an overlying coiled spring appearance of the mucosa.

In general, the treatment with the least morbidity and the fastest recovery consists of surgical evacuation of the hematoma through a serosotomy. The abdomen may be closed with or without a drain. Some authors have advocated resections or bypass procedures,[3] but these appear to be rarely necessary, and are indeed undesirable when simple evacuation of the clot will relieve the obstruction. At the time of serosotomy, all the clot should be evacuated through an incision in the serosa along the antimesenteric side of the bowel. It is not necessary to repair the serosal incision following evacuation. With a correct preoperative diagnosis and prompt surgical evacuation of the

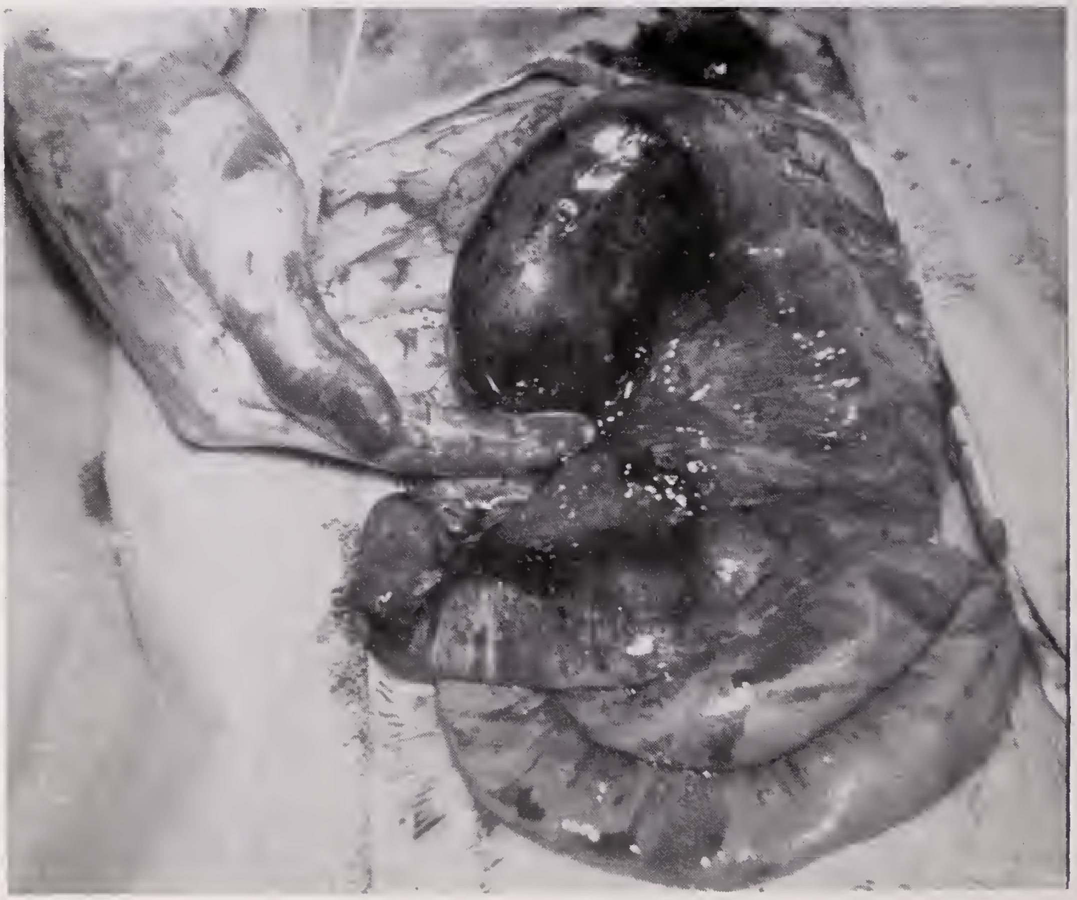

Figure 2. Jejunal intramural hematoma with surgeon's index finger on the Ligament of Treitz.

hematoma, the morbidity of this entity should become quite low.

The majority of intramural hematomas from trauma are duodenal or duodenal-jejunal, and rarely exclusive to the jejunum. They occur primarily in male children. The incidence has been gradually rising during the last decade, and with the greater emphasis upon seat belt use, it is predicted that the incidence rate will increase. With a good history of injury, symptoms of pain and upper gastrointestinal obstruction, and an upper gastrointestinal series with barium, the diagnosis should be made preoperatively. The treatment of choice is prompt laparotomy with simple evacuation of the clot via serosotomy. With this regimen, the morbidity of intramural hematoma should be minimal.

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Bacteriuria: Reliable Detection By Mini Culture

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Early detection of urinary tract infection by routine screening for bacteriuria is the primary and most feasible means to reduce the morbidity and mortality of chronic renal disease. In children, for example, there is an average lag of 3 years between the time of onset of symptoms and the time of diagnosis of a chronic urinary tract infection.[1] The gross inadequacy of pyuria as a screening method is well documented.[2-4]

Asymptomatic bacteriuria was found by Kunin[5, 6] in 1.1% of girls, ages 5-24, and 0.04% of boys. Infections in boys are almost always associated with underlying urinary tract abnormalities, and screening represents an important means of early detection. In a follow-up study of school girls over a period of 7 years, Kunin has reported a cumulative index of 2.9% bacteriuria detected during the first 7 years of school and 0.31% conversion rate per year.[7] Routine screening of newborn babies has revealed bacteriuria in as high as 9.8%.[8] Pregnant women are another population at risk, the incidence of bacteriuria averaging 6%.[9] Although not all the reported data is clear-cut, there is considerable evidence supporting a decreased incidence of abortion, prematurity, and stillbirths if urinary tract infections during pregnancy are detected and treated. Of patients treated for asymptomatic bacteriuria, at least 60% have a recurrence within 2 years and follow-up cultures at 3 month intervals are mandatory.[5, 6]

Screening for bacteriuria is most productive in the high risk populations: neonates, young children, all girls and women, particularly during pregnancy, all patients with possible obstructive uropathy, all patients with prior bacteriuria, adult diabetics, and all elderly or debilitated patients. The only obstacle is financial: the time needed for collection of clean catch specimen; the cost of bacteriologic studies.

Collection of a clean catch specimen in girls can be facilitated by use of the open front potty seat that requires the legs to be widespread. The mother is told how to spread the labia, wash with soap (not detergent) and rinse before attempted collection of the midstream specimen. Suprapubic puncture of the full bladder is the best method for collection of an uncontaminated specimen in young infants, and the method employed on the newborn service of this medical center.[2]

The current cost of a quantitative culture by loop dilution or pour plate averages $15,[10] precluding wide-scale screening and repeat follow-up.

Many tests have been devised to be used as simple screening tests. The Greiss nitrite test[11] is unreliable, since many bacteria which produce urinary tract infection do not reduce nitrate at all, and different strains of bacteria reduce nitrate at different rates. Guze and Kalmonson[12] reported that the triphenyl tetrazolium chloride reduction test yielded only 65% positive results with false positives in 5.7%. The catalase test was reported by Montgomerie[13] to result in an excessive percentage of false positive results.

Recent bacteriologic techniques employed in commercially available screening kits are (Quanti Kit, Portland, Oregon),[14] Uricult Dip Slide System (Orion),[15] the dip stick determination of bacteriuria,[16] and Testuria Mini Culture Technique (Ayerst).

This is an evaluation of the simultaneous culture of urine by the Testuria mini culture technique and by pour plate method.

Material and Methods

Clean catch urine specimens were obtained from 400 patients at the University of Nebraska Hospital, Omaha, who were undergoing examination for urinary tract infections.

The urines were collected in sterile urine bottles and either cultured immediately or refrigerated until tested on the same day.

Pour plate method:

1. 0.1 ml of urine was mixed with 9.9 ml of saline. 0.1 ml of this dilution was transferred to a second tube of saline containing 9.9 ml of saline.
2. Four serial dilutions of 1:100, 1:1000, 1:10,000, and 1:100,000 were made by adding 1 ml of urine from tube 1 to the first Petri dish, 0.5 ml of urine from tube 1 to the second Petri dish, 1 ml of urine from tube 2 to the third Petri dish, and 0.5 ml of urine from tube 2 to the fourth Petri dish. Liquid agar was poured into the four Petri dishes and swirled to allow even distribution.
3. For identification of the organisms, the urine was centrifuged, the supernatant poured off, and a loopful of the remaining sediment inoculated onto blood agar and EMB plates with antimicrobial sensitivities by the disc method.

Testuria Mini Culture Technique:

This is a sterile kit which consists of a rectangular 2.0 x 1.3 cm rectangular tub half filled with trypticase soy agar and sealed with cellotape and mat filter paper sticks which are sterile and have a perforated line 1 cm from the end to allow bending.

The urine is thoroughly mixed, the white tab of the strip is dipped into this urine and applied over the culture media for 10 seconds.

The dish is resealed and incubated inverted at 37° C temperature in a small, inexpensive incubator (Testuria Incubator, made by Thermolyne Corporation) for 18-24 hours. Cost of the materials is 40c per culture.

Interpretation was made as outlined in Table 1.

Table 1

	Mini Culture	Pour Plate
Negative:	0- 2 cols	$<$25,000 cols/ml urine
Suspicious:	3-25 cols	25,000-100,000 cols/ml urine
Positive:	26 and over	$>$100,000 cols/ml urine

Table 2

Mini Culture	Pour Plate		
Positive	Negative	2	0.5% False Positive
Suspicious	Negative	10	2.5%
Suspicious	Positive	9	2.25%
Negative	Positive	12	3.0% False Negative
Negative	Suspicious	5	1.25%
No Difference		362	90.5%
	Total	400	

In Table 2 comparison is made between pour plate and Testuria mini culture. In this study there was correlation of the findings by the two methods in 90.5% of the cases. False positives were 0.5% and false negatives 3.0%. Equivocal results were obtained in 4.75%. These equivocal urines should be recultured by pour plate, as 2.5% had fewer than 100,000 cols/ml and 2.25% had more.

Discussion

The requisites of a screening test are that it should be sensitive and thus miss the minimum number of cases; it should give few false positive results; it should be easily and quickly done and the cost should be low. Only if the above criteria are met can a screening test be of maximum utility. The mini culture used in the present study was found to meet the above criteria. Although it is necessary to use the technique carefully and follow the instructions carefully, the test can be easily done by office personnel after minimal instruction. Some experience is required for interpretation of results and reasonable speculation may be made as to the type of bacteria. Confirmatory cultures on selective agar are obviously necessary for specific identification. The very simplicity of the test, however, makes it more suitable for widescale tests than office tests employing multiple media.

In the present study, the results of the mini culture technique were compared with the pour plate. The false positive results in 0.5% and the false negative results of 3% compare favorably with the report by Hobday[17] of 4% false positives and 2.5% false negatives employing the same technique. Abbasi[18] used the mini culture to screen diabetic patients for urinary tract infection, with a similar report of 3.8% false positives.

Dodge[19] compared the results of mini culture and pour plate culture in 8,469 urine specimens from 8,371 children. There was concordance in 97.3% when 0 to 3 colonies were considered negative and 4 or more colonies were considered suspicious on the Testuria culture. False negative and false positive results were 1.3 and 1.4% respectively.

Summary and Conclusions

Testuria mini culture of urine has been found by us and by other authors to be a simple, inexpensive, and highly reliable test for widescale screening for urinary tract infections. In 400 simultaneous pour plate and mini cultures, the screening method yielded only 0.5% false positives and 3.0% false negatives.

Pyuria and classical symptomatology are grossly inadequate for the detection of bacteriuria. It is recommended that routine screening for bacteriuria be incorporated into at least one preschool evaluation of both boys and girls, into all routine evaluations of girls and women, especially during pregnancy, adult diabetics and all elderly or debilitated patients, and in the repeated and continued follow-up of all subjects with antecedant bacteriuria.

SCREENING FOR BACTERIURIA SHOULD BE AS ROUTINE AS URINALYSIS.

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President's Page

By the time this appears in print, the N.S.M.A. will have completed its 103rd year under the outstanding leadership of Doctor Clarence R. Brott. Our annual meeting with its many highlights seems a fitting climax to his devotion to the causes of our profession. The scientific sessions were of the highest caliber and our House of Delegates faced the current issues with strength of purpose and insight. He will follow a long list of distinguished past presidents of our State Association, but I am sure I express the sentiment of the entire membership in anticipating his continued role of leadership through the Policy Committee.

Medicine in Nebraska, as well as the rest of our nation, continues to face a multiplicity of problems and the N.S.M.A. must continue to play a leadership role in their solution. It seems to me that the issues for our Association of the next twelve months can be placed in three broad categories: internal affairs (state and national), legislation, and manpower. The answers to our problems in each of these categories will require the active concern and constructive participation of every member. In all humility, I begin my year as your President and pledge my full efforts in meeting our problems as well as our goals.

Increasing efforts have been made during the past year in achieving improved communication for the N.S.M.A. This, in its broadest concept, must receive our continued attention. If we are to make the voice of organized medicine heard in Nebraska, that voice must have the broadest possible background and represent the best thinking of our entire membership. Our efforts at communication must be aimed at ourselves, at state and national political bodies, governmental agencies, allied health organizations and the public at large. In this context we must listen as well as speak individually and collectively. It would be unrealistic to deny that each of these groups plays a part in delivering health care, but the physician's role will continue to be paramount with each member acting to strengthen the N.S.M.A. program.

Roger D. Mason, M.D.,
President, Nebraska State
Medical Association

WashingtoNotes

1. American Medical Association spokesmen urged that the AMA Medicredit national health insurance program be adopted as the best way to assure the nation's poor access to quality medical care and to free families with moderate incomes from the fear of bankruptcy resulting from a long, costly illness.

Dr. Max H. Parrott, chairman of the Board of Trustees, and Dr. Russell B. Roth, speaker of the House of Delegates, represented the AMA before the Senate Health subcommittee at one of its hearings on national health insurance and major health care problems facing the nation. They estimated the first year cost of Medicredit at $14.5 billion, much less than some proposals before Congress that would have the federal government virtually take over the nation's health care delivery.

The Medicredit legislation (H.R. 4960 and S. 987) has been introduced in Congress with 131 Democrats and Republican members as sponsors.

2. In Seattle, the University of Washington is providing former medical corpsmen with a three-month refresher course on civilian medical procedures. Upon completion of the course, these former medics are sent to physicians across the state, who have agreed to act as their preceptors, and to employ them after 12 months of on-the-job experience. Some of these men are already on the job, mostly in rural communities. This Medex Program, as it is called, is supported by the Washington State Medical Association and its Education and Research Foundation, as well as the AMA's Council on Rural Health.

In Lawrence County, Ala., another project also involves the services of former medical corpsmen. In this Appalachian area, there are only six physicians to serve a population of 30,000. Basically, the project has two modes of patient contact — a family care unit and "out-reach" teams. The out-reach team introduces families to the community health service personnel, who can then begin the history-taking process and refer the family to the family care unit.

In southern Monterey County, Cal., a small population is increased to 23,000 by a seasonal influx of migrant farm workers. A group of 10 physicians and 80 supporting ancillary staff members have undertaken to provide medical care to all eligible residents, including migrant farm workers. Patients are cared for in the same facilities, by the same medical staff that serves the self-sustaining members of the community. Transportation — including a van, equipped for wheelchair patients — serves the entire project area. Grantee for the project is the Monterey County Medical Society with funds from the Office of Economic Opportunity.

Another significant approach may soon be attempted in the wilderness of southwestern New Mexico. This is a 50,000 square mile region of high mountain ranges and portions of the Chihuahua and Sonora Deserts. Some 95,000 inhabitants of the region are served by only three physicians.

The program here calls for a central health center and a series of remote health stations. The stations will be staffed by persons trained in health care, but not as highly trained as a physician. They will be equipped with sensors, similar to those used by the National Aeronautics and Space Administration to monitor the health of the astronauts. Thus, a patient visiting one of the remote health stations will have attached to himself the electronic sensors, which will transmit heartbeat, respiration, blood pressure and other vital data to the computer-controlled center, where a physician would monitor the symptoms and advise the allied health staffer by radio.

3. President Nixon, saying that he personally opposes abortions as "an unacceptable form of population control," rescinded a Pentagon order liberalizing the policy on abortions in military hospitals.

4. New government regulations for medicaid include a requirement that the physician

certify a patient's continuing need for inpatient care on or before the 12th day of hospitalization and again no later than the 18th day.

Other final regulations issued by the Department of Health, Education and Welfare give the Internal Revenue Service more power to police income earned under the medicaid program. States must file annual information returns showing aggregate amounts paid to providers of services identified by name, address and social security number or employer number.

HEW officials said the new regulations on hospitalization certification are expected to reduce medicaid expenditures by cutting down on the time spent by patients in hospitals.

Inpatient hospital costs have been accounting for about 40 percent of total medicaid expenditures, or about 1.9 billion dollars in the fiscal year 1970.

Down Memory Lane

1. Disseminated heat holds, and will in a steadily increasing measure continue to hold, a high and certain place in the successful palliative and curative treatment of all forms of malignancy.

2. Only a few years ago a new and interesting specialty, psychiatry, as a branch of the healing art, was introduced, and soon assumed important and definite proportions, and has today taken a prominent place among the specialties in medicine.

3. Forty babies out of every 1,000 born alive died before they are one month old.

4. All dead teeth may not be infected or dangerous, but we all know that a dead tooth negative to the Roentgenogram is not necessarily a safe tooth.

5. According to Popular Science Monthly, a doctor at Johns Hopkins Hospital has discovered a way of pumping purified air into the brain so as to locate and remove tumors which would cause either idiocy or death.

6. The problem of state health insurance is not one that physicians may consider of their own free will.

7. The percentage of bad accounts and charity to the poor should be carefully estimated or determined.

8. That the Nebraska State Bureau of Health finds it necessary to keep prodding physicians for better and more prompt birth and death reports is lamentable.

9. The short Bruening oesophagoscope was passed, no anaesthesia being used.

10. The death rate, from disease and wounds was much lower during this war than in any preceding one.

Nebraska State Medical Journal
May, 1921

Our Medical Schools

Dr. Stone appointed

The new vice-chairman of the department of medicine at the University of Nebraska Medical Center is Dr. Daniel B. Stone. Dr. Stone also holds the rank of professor of medicine at Nebraska.

Dr. Stone was an executive associate dean at the University of Iowa School of Medicine from 1967-1969. Dr. Stone received his B.S., M.D., and D.P.M. degrees from the University of London.

Where Creighton graduates go

Seventy senior medical students at Creighton University have been placed for internships at hospitals across the country, according to Dr. Joseph Holthaus, Dean of the Creighton School of Medicine. Only four members of the senior class remain unmatched in an internship at this time.

Sixty-six of the 70 were placed through the National Intern and Resident Matching Program, while four were placed through military programs. Fifty-three of the 66 received their first choice of hospitals and intern programs.

Twenty-nine of the new doctors will serve their internship in Nebraska when they graduate, 28 at Creighton Memorial St. Joseph Hospital and one at the University of Nebraska Affiliated Hospitals.

Eye bank

Equipment which will have the effect of substantially increasing the amount of eye tissue available for corneal transplants has been provided to the University of Nebraska Medical Center by the Lions Clubs of Nebraska.

Through the Lions Eye Bank program, the university has ordered the necessary equipment to preserve corneas by freezing at extremely low temperatures.

At the present corneas must be transplanted within 48 hours of their removal from a donor.

By utilizing the new technique, corneal tissue can be safely preserved for 90 days, according to Dr. John Filkins, an Omaha ophthalmologist and medical director of the Lions Eye Bank.

After the equipment arrives, Dr. Filkins and Eye Bank technician Lucy Lipp will conduct laboratory animal experiments with corneal tissue until they are satisfied they can recommend the usage of corneas which have been preserved by freezing to Nebraska's eye surgeons.

Psychiatry and adolescence

Seven high school students from various public high schools in Omaha will take part in a postgraduate course on psychiatric problems of adolescence at the University of Nebraska Medical Center June 3 and 4, 1971.

Other participants, in addition to faculty members of the University of Nebraska College of Medicine, will include Dr. Craig Fullerton, assistant superintendent of public schools in Omaha, and Donald Knowles, Douglas County attorney.

Sessions will be conducted in the auditorium of the Basic Science Building. Course coordinators are Drs. William Burrows, professor of psychiatry; William Roth, Jr., professor of psychiatry, and Norman West, assistant professor of psychiatry.

Registration fee for physicians is $50 and includes two luncheons. Registration for other members of the health team is $30 and includes two luncheons.

Twelve hours of Category I credit with the American Academy of Family Practice are available for attending the course.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—
May 22 — North Platte, Elks Lodge
June 5 — Norfolk, Elks Lodge
June 12 — Ogallala, Elks Lodge
June 26 — Kearney, Elks Lodge

THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS — The Nineteenth Annual Clinical Meeting of The American College of Obstetricians and Gynecologists will be held in San Francisco, May 3-6, 1971. Contact: Donald F. Richardson, 79 West Monroe Street, Chicago, Illinois 60603.

NEBRASKA ASS'N OF MEDICAL ASSISTANTS — Fifth annual convention and educational seminar; May 14, 15 and 16, 1971; Villager Motel, Lincoln.

SYMPOSIUM ON GENETIC COUNSELING presented by Childrens Memorial Hospital, June 16, 1971; sponsored by the National Foundation — March of Dimes; at the Sheraton Chicago Hotel, Chicago, from 8:30 a.m. to 5:00 p.m. Write to: The National Foundation — March of Dimes, 173 West Madison St., Chicago, Illinois 60602.

AMERICAN MEDICAL ASSOCIATION — Annual Convention, Atlantic City, New Jersey, June 20-24, 1971.

AMERICAN ASSOCIATION OF MEDICAL CLINICS — North Central Regional Meeting; July 17, 1971; Holiday Inn, La Crosse, Wisconsin. Write to Edward M. Wurzel, M.D., Executive Director, P. O. Box 949, 719 Prince Street, Alexandria, Virginia 22313.

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY — Postgraduate Course, October 4 through 9, 1971 at the University of Illinois Hospital Eye and Ear Infirmary. Write to Department of Otolaryngology, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE — 22nd Annual Session; October 11-15, 1971; Americana Hotel, New York City. Address of AALAS is: 4 East Clinton St., P.O. Box 10, Joliet, Ill. 60434.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting, House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY — October 23 through 29, 1971; in U. of Illinois Eye and Ear Infirmary. Write to: Otolaryngology, P.O. Box 6998, Chicago, Illinois 60680.

OMAHA MID-WEST CLINICAL SOCIETY —39th Annual Postgraduate Assembly; November 1, 2 and 3, 1971; Omaha Hilton Hotel. The Society's address is 1040 Medical Arts Bldg., Omaha 68102.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City. NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28 - December 1, 1971.

Welcome New Members

William H. Gondring, M.D.
2300 South 13th Street
Lincoln, Nebraska 68502

Richard W. Steenburg, M.D.
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Omaha, Nebraska 68105

Marcus R. Beck, M.D.
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Kimball, Nebraska 68145

Richard O. Forsman, M.D.
Kimball, Nebraska 69145

Cecil T. Bromfield, M.D.
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Richard Jackson, M.D.
Pawnee City, Nebraska 68420

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John Hassinger, M.D.
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Andris Matisons, M.D.
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Lincoln, Nebraska 68510

Robert D. Sidner, M.D.
17 West 31st
Kearney, Nebraska 68847

Wally Vnuk, M.D.
Good Samaritan Hospital
Kearney, Nebraska 68847

The Law

National health care hearings

The Senate Subcommittee on Health, in continuation of hearings on national health care, heard testimony from Ned F. Parish, Executive Vice President of the National Association of Blue Shield Plans, and Walter J. McNerney, President of the Blue Cross Association. Mr. McNerney noted there is general agreement that planned interventions are necessary in the health care field, but that the problem is agreeing on a proper strategy of intervention. He warned against the temptation to move from the disabilities of one extreme to those of another, for instance, from excessive fragmentation to excessive rigidity. He spoke against a monolithic financing system, if our system of pluristic delivery is to be preserved, while urging a continued public and private financing system with the Federal government playing a role of guidance and motivation and the private sector being involved in the specific provision of health care.

Mr. Parish stated that what presently exists is not a non-system of health care delivery, but a series of systems, sometimes competitive, usually complementary, and almost always derived from the needs, resources, and specific circumstances of a given area. He indicated that radical change could not be effected without a breakdown of health care delivery if it were proposed without regard to these needs and circumstances. The witness also discussed the potential of private carriers for promoting constructive modification in the delivery system, referring to use of health maintenance organizations, prepaid group practice, neighborhood health centers, surgical care centers, model cities projects, foundations for medical care and better use of allied health personnel. He also proposed the establishment of a National Council on Health Policy within the Office of the President to develop a statement of national health priorities along with a legislative program.

Reduction of medicare premium

Senator Mondale (D) Minn., has introduced S. 1336 to reduce the present Part B Medicare premium to $4 through June of 1971 and to $3 a month thereafter. Revenues lost by this reduction in premium would be paid for out of general funds . . . Senator Mondale has also introduced S. 1337 to abolish the Medicare requirement that the first three pints of blood be paid for by the recipient.

Rural health service bill

Senator Pearson (R) Kan., has introduced S. 1353, the Rural Health Service Act, to increase the number of physicians and allied health personnel serving rural areas. The bill has student loan forgiveness and other features to encourage rural youth to pursue courses in medical and allied services. It also provides a demonstration program for use of part-time medical clinics and mobile diagnostic units in isolated rural areas.

Model code for allied health professions

S. 1354, by Senator Pearson, provides for establishment of a model state code for the allied health professions for use by states in drafting licensure and certification legislation. The code would set out education requirements and experience acceptable as a substitute for education, and specify duties to be performed under the direction of a physician (or without prior authorization) and liability of allied health personnel for their activities.

Who's Zoo

My throat is sore,
Said the giraffe.

The hyena said,
It hurts to laugh.

My feathers are killing me,
Said the peacock.

My tongue is hurting,
Moaned the snake,
I've even got a bellyache.

But the turtle said,
Please feel my back,
It's out of whack.

Just have a look at my tusks,
Asked the walrus.

There's a lash in my eye
Said the fly.

I can't hear,
Said the deer.

I can't see,
Said the bee.

My wings hurt,
Said the bat.

I've got a toothache,
Said the whale;
And the lion roared,
I've a very sad tail.

My feet hurt,
Said the centipede.

Then the elephant spoke,
    I can't dunk
    My trunk;
    It's full of junk.

I've an ingrown toenail,
Said the hawk.
And the parrot muttered,
I can't squawk.

I've got graying locks,
Said the big musk-ox.

We do our best
From womb
To tomb, but
Would you like these
In your waiting room?

—Frank Cole, M.D.

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Physicians' Classified

Advertisements in this column are at a rate of ten cents per word with a minimum of $4.00 per insertion. Copy must be received by the fifth of the month preceding date of publication and should not exceed 50 words. Advertisements from members of the Nebraska State Medical Association will be accepted without charge for one issue. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

CLINIC AVAILABLE — General practice in furnished clinic. County seat town, SW Nebraska. 3 nursing homes in town, good territory. Write Box 8, Beaver City, Nebraska.

IMMEDIATE OPENING — Physician for emergency and outpatient department of hospital in Omaha. Fee for service with minimum guarantee. One month's paid vacation and two weeks yearly for meetings. Contact Box 28, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

DILLON, COLORADO — Luxury condominium on lake, sleeps 6, automatic kitchen, 2 bedrooms, 2 bathrooms, fireplace, magnificent view. Maid service. Ski Arapahoe, Keystone, Vail, Loveland, and Breckenridge. Summer—fishing, sailing, pool, tennis. $60.00 nightly for 6, less by week. Contact S. C. Percefull, M.D., 3535 South Lafayette, Englewood, Colorado 80110. Phone 303-781-7824.

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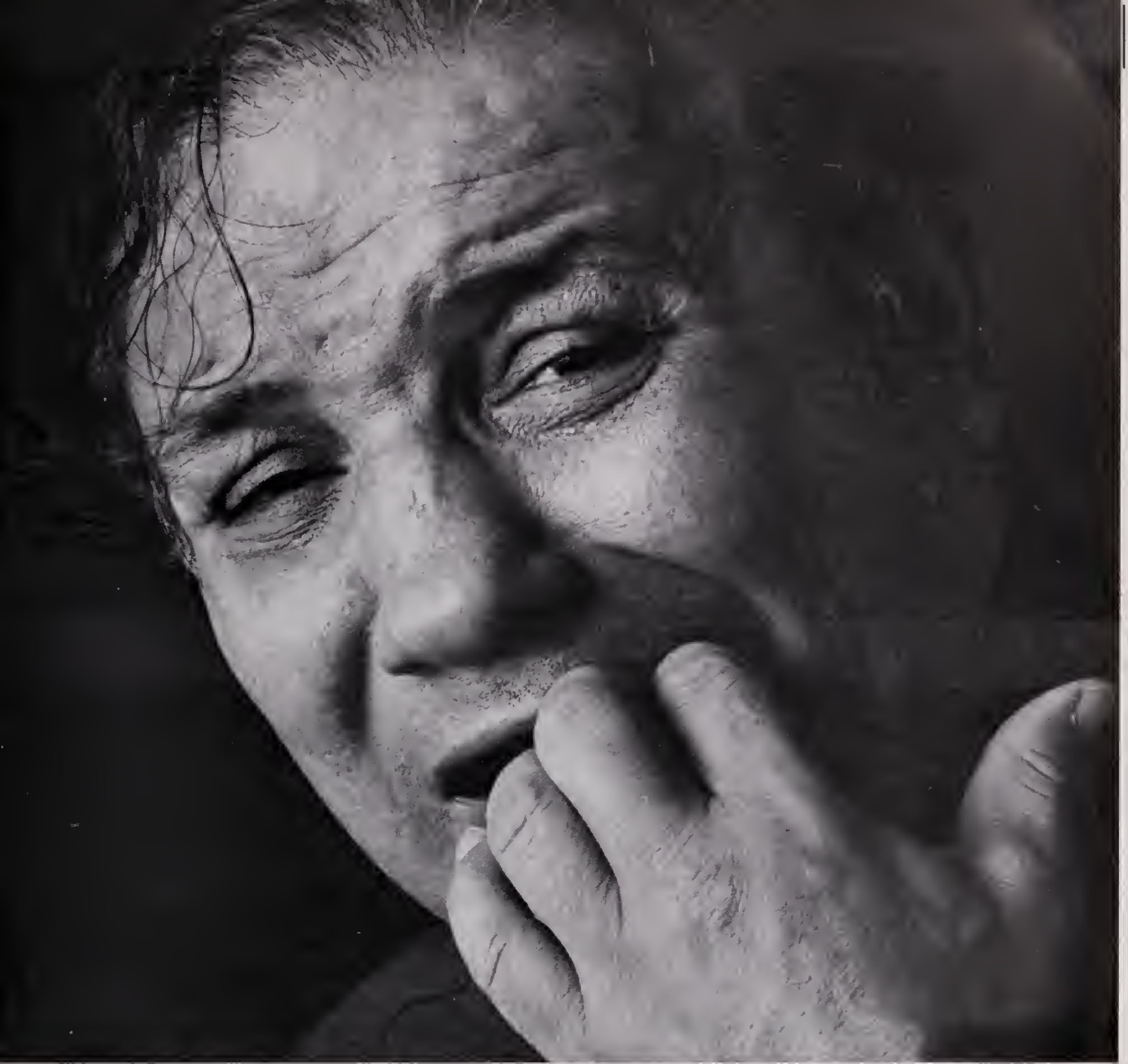

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The Editor of this Journal assumes no responsibility for opinions and claims expressed in the articles published herein.

Manuscripts to be presented for publication in the JOURNAL should be typewritten, double-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8½ by 11 in.) white paper. Wide margins (at least 1¼ in. on left) should be left free of typing. On the first or title-page should be shown the title of the article, the name (or names) of the author, his degree and other significant credits. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the Journal's address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.

The Law . . .

Administration's national health proposal introduced

Representative Byrnes (R) Wis. has introduced H.R. 7741, the National Health Insurance Partnership Act of 1971. This is the Administration's two-part proposal for national health insurance. The first part would require all employers, exclusive of government and religious organizations, to provide health insurance protection for employees. Benefits would include inpatient hospital services, physicians' and other health services. The second part, establishing a Family Health Insurance Plan, would provide health care protection for low-income families not covered by any employer plan. The bill is similar to S. 1623, introduced last week by Sen. Bennett (R) Utah. Unlike the Senate bill, however, the House version provides a federal subsidy to small employers to help meet the cost of insurance for its employees.

Proloid®(thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: ¼ grain; ½ grain; scored 1 grain; 1½ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

The Law . . .

Doctor draft extension passes house

By a vote of 293-99, the House has passed H.R. 6531, which amends the Selective Service Act of 1967, and extends the doctor draft for two years. The bill now goes to the Senate.

Medicinews . . .

Student nurses

Schools of nursing in the United States reported unusually large increases in the numbers of men and women studying to become registered nurses during the academic year 1969-70, according to the annual survey released by the National League for Nursing, New York.

Admissions to all types of educational programs preparing RNs rose to 75,349 last year, a gain of 17.4 percent over the previous year's 64,157. During the same period, enrollments increased by 9.1 percent, to an all-time high of 164,545. Graduations reached 43,639, or 1,443 (3.4 percent) more than for the preceding twelve months.

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An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

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Medicinews . . .

Peer review manual

A guide for the development and operation of a peer review program is being prepared by the American Medical Association's Council on Medical Service and its Committee on Health Care Financing.

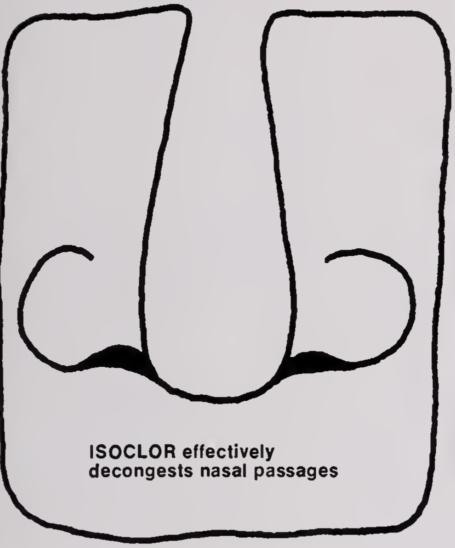
To be known as the *Peer Review Manual,* the guide was to be available for the first time during the National Workshop Conference on Peer Review in Chicago, May 21-22. The manual was presented in a vinyl covered loose-leaf binder for later additions and updating. Copies are $4.00 each.

The manual included history and general concepts for initiating peer review activity. It described the operation of a peer review program — telling how to plan and determine the composition of a review committee, sketching the areas of review, outlining methods to activate peer review, and suggesting the line of appeal.

The *Peer Review Manual* also explained how to develop guidelines for the evaluation of quality, hospital utilization review, staffing and sources of funding of a peer review program, and spells out means of data collection and analysis. Legal considerations are examined and samples of state and local peer review mechanisms are furnished.

For additional information contact: Division of Medical Practice, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610.

HERE ARE THE COLD FACTS:



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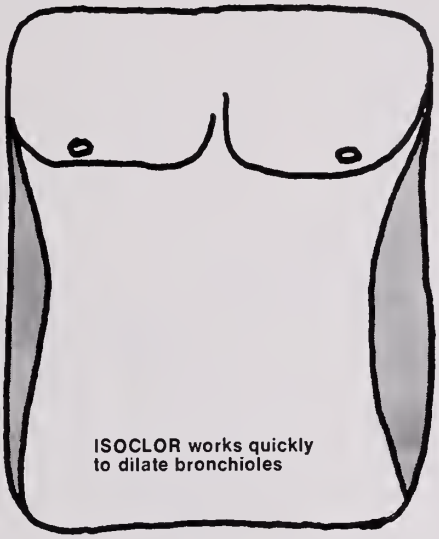

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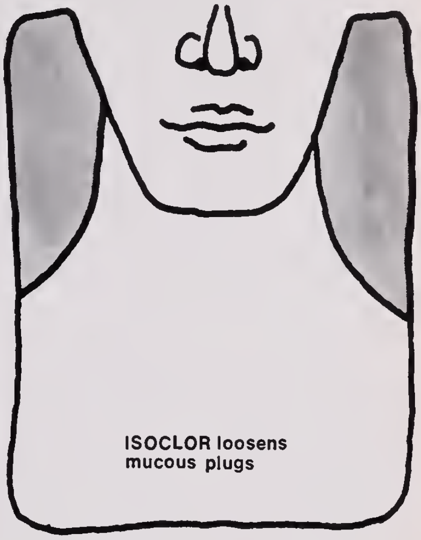

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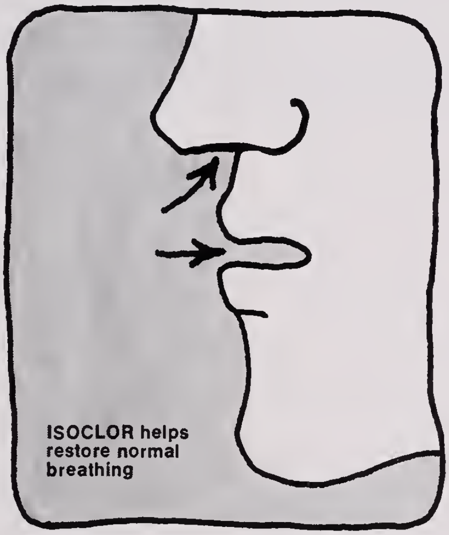
ISOCLOR relieves runny eyes



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COMPOSITION: Each tablet or 2 teaspoonfuls of liquid contains:

Chlorpheniramine Maleate	4 mg.
Pseudoephedrine HCl	25 mg.

Each ISOCLOR Timesule contains:

Chlorpheniramine Maleate	10 mg.
Pseudoephedrine HCl	65 mg.

In a special pellet form providing both prompt and sustained effect.

INDICATIONS: For symptomatic relief of colds, hay fever, allergic conjunctivitis, perennial rhinitis of allergic origin and sinusitis. Opens nasal, sinus and bronchial passages orally.

CONTRAINDICATIONS: Sensitivity to antihistamines or sympathomimetic agents. Severe hypertension or severe cardiac disease.

PRECAUTIONS: Use with caution in patients suffering with hyperthyroidism. Patients susceptible to the soporific effects of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

CAUTION: Federal law prohibits dispensing without prescription.

SUPPLIED: Tablets: Bottles of 100 and 1000. Liquid: 4 oz. bottles, pints, and gallons; Timesules: Bottles of 50, 250, and 1000.

DOSAGE AND ADMINISTRATION:	Tablets	Liquid	Timesule
Adults:	1 q. 4 h.	2 tsp. q. 3-4 h.	1 q. 12 h.
Children 6-12 years:		1 tsp. q. 3-4 h.	
40-50 pounds:		¾-1 tsp. q. 3-4 h.	
30-40 pounds:		½-¾ tsp. q. 3-4 h.	
20-30 pounds:		¼-½ tsp. q. 3-4 h.	
15-20 pounds:		⅛-¼ tsp. q. 3-4 h.	

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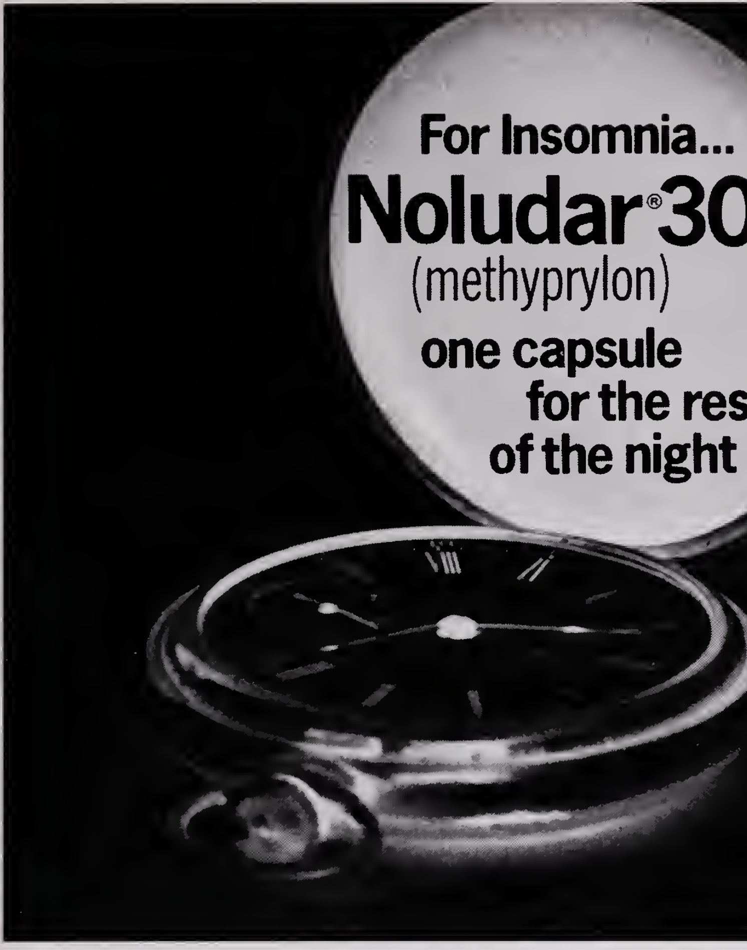

Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

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Medicinews . . .

The AMA

The 120th annual convention of the American Medical Association will be held June 20-24, 1971 at Atlantic City.

Some 32,500 physicians, medical students, nurses, allied medical professionals, industrial and scientific exhibitors and guests are expected to attend.

The scientific program and exhibits will center at Atlantic City Convention Hall, while the AMA's policy-making body, the House of Delegates, will be in session at the Chalfonte-Haddon Hall Hotel.

Wesley W. Hall, M.D., of Reno, Nev., will take office as new president of the AMA, succeeding Walter E. Bornemeier, M.D., of Chicago. A new president-elect, to take office in June, 1972, will be elected by the House.

Each of the 23 major scientific sections will conduct scientific programs.

The AMA Women's Auxiliary of the AMA also will hold its annual convention in Atlantic City, June 18 - 24, at the Traymore Hotel. Mrs. G. Prentiss Lee will take office as new president, succeeding Mrs. R. C. L. Robertson.

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THE NEBRASKA STATE MEDICAL JOURNAL

WHAT IS MAN?

He is the only animal that can smile, I think Darwin said, but I have seen other primates appear to smile, and my poodle sometimes seems to smile; and all dogs wag their tails, which is their way of smiling.

He is the only animal that needs clothes and wears clothes. He has more heartbeats per lifetime than other animals. He has an opposable thumb. He walks erect on his lower extremities. He cleans himself after defecating. He marries, but cardinals, redbirds, that is, do, too. He is the only mammal capable of the face to face coital position. He speaks. He prays.

He sometimes cuts his hair and shaves his beard, and she shaves her legs and axillae. He has no tail. He is omniverous, but systematically; he grows plants and raises other animals to eat. He bathes. He thinks.

He pollutes, but other animals do, too. He kills, and not for food. He is the only animal that takes drugs. And gets drunk. He is the only animal without zero population growth.

And he writes.

—F.C.

WHO GETS INTO MEDICAL SCHOOL?

You will find two excellent articles in this issue telling how our medical schools decide who gets in and who does not. I have read somewhere that almost half of the applicants are accepted, but the statistics in these essays are quite different. Of course, one student will apply to several schools, and this may bring the figures together.

I think it would be wise to find out how healthy the candidate is, and to consider his life expectancy in addition to grades and personality.

I am particularly concerned with mental disease and with the high rate of suicide among physicians. I should feel a sense of failure and even remorse if I had admitted a student to medical school who killed himself five years later.

I do not know what students are doing on the committee; the idea smacks of permissiveness. I cannot think that a medical student can wisely decide who should be another medical student; he is apt to vote for his friends. Students may want a piece of the action, as I want a Rolls-Royce automobile, but neither of us qualifies.

The candidate should allow physicians who have treated him to tell everything they know about him to the admissions committee. The practice of medicine is not easy, and admitting an unstable applicant is unfair to the student and to the patients he will some day treat.

I should remove the students and put an internist and a psychiatrist in their place, and give a thorough physical examination to every candidate who is about to be accepted.

I'd want to know how well each individual did long after graduating from medical school, and I would try to correlate his success with the committee's opinion of him years before. We might thus improve the technique of interviewing students.

But read the articles. See how hard the committees work, how awesome is their task, and how they decide who becomes a doctor and who does not.

—F.C.

ODDS AND ENDS

Odd.

Flicked the wireless switch and heard someone singing about a butterfly of love. The French for butterflies of love is *papillons d'amour,* and that's what they call Phthirus pubis, also known as pubic lice, or you-know-what.

End.

I've finally seen a whole journal without a single article written by one author, and I counted 13 articles. I'll send you the reference if you write.

Odd.

Anuria has been defined as less than 50 ml in 24 hours. I thought it meant no urine at all. Of course, zero is less than 50, but I'd call 40 something else, like oliguria.

End.

Seven out of eight people in the US own some form of private health insurance.

Odd.

1969: 14 KU graduates are in Nebraska.

1970: 134 Kansas physicians went to school in Nebraska.

End.

I got to thinking about the hypochondriac and the hypochondrium one day, and after much researching, without a grant, discovered that the first is named for the second. "Hypo" means under, and "chondros" means cartilage, in Greek, which I do not speak with ease, but the hypochondrium, and particularly the spleen, was supposed to be the seat of this disorder. On my next nonstop groping through the dictionary, I fell to wondering about schizophrenic and subphrenic. Same thing: phrenic means pertaining to the mind or to the diaphragm; "phren" means both in Greek, which is still Greek to me. Old-timers thought the mind was in the upper part of the abdomen. But don't laugh. *We* don't know where it is, we *still* don't know what the spleen is for, and doesn't worrying give you ulcers? Think about it. Use your spleen.

Odd.

I have somehow managed to have a friend in each medical specialty, and that means 63 friends, but years take their toll of friends, while they add to the number of specialties. Still, I have a favorite pediatrician, and now I find I must reach for a magnifying glass to read his address. The years have been kind, the penguins are supposed to have thought when Admiral Byrd came to see them again. But my friendly ophthalmologist has not said that to *me*, and to compound my reading troubles, the pediatrician deals with an early age group, in patients and in parents; I knew a girl who got her premarital examination from her pediatrician. So my mail and my visual acuity move in opposite directions and are now worlds apart. I looked up sizes of type; perhaps I can persuade pediatricians to use pica, but they think that's a disease.

End.

Pollution is either getting worse and we must do something about it, or it's always been with us and we're just beginning to react to it. But I have just run across this sentence from Kafka's "The Trial." "Then there came into the room through the great window a blend of fog and smoke, filling it with a faint smell of burning soot."

The end.

I just found an article with 301 references. I'll send you *that* reference, too.

The other end.

One of the recognized specialties is traumatic surgery. I've seen a lot of it, but I didn't know these fellows were specialists.

—F.C.

How Benign a Symptom is Facial Numbness? — D. C. Thrush and M. Small (Dudley Rd Hosp, Birmingham, England). Lancet 2:851-853 (Oct 24) 1970.

Seven patients with facial numbness of between three weeks' and 18 months' duration were seen at a neurological clinic over a period of 18 months. The final diagnoses in six were carcinoma of the nasopharynx, salivary adenoma, secondary adenocarcinoma, disseminated sclerosis, brain stem vascular accident, and dental trauma. Facial numbness should only be accepted as a benign entity after resolute investigation and careful follow-up of such patients over a prolonged period of time.

Meeting Nebraska's Medical Needs In the 70's*

FRANCIS L. LAND, M.D.†

MR. President, Ladies and Gentlemen. It gives me a great deal of pleasure to be with you today and to bring you a few thoughts on medicine in the 70's in Nebraska. I am honored by your request for me to make this presentation and am pleased since this type of assignment makes the preparer of the paper sit down and think about what is going to happen in the future.

Now my crystal ball isn't any better than yours, and undoubtedly some of the things I suggest will occur and some probably will not occur. I nevertheless, at your request, will attempt to look into the crystal ball of the future.

I think that one thing we have learned in the recent years is that provision of health services cannot be considered separately from other services in the community, such as education, water supply, religious opportunity, etc. Planning in a community must of necessity include planning for health services. Many communities, newly developed in the East, did not take this into consideration and now are having the problem of providing the needed health services in an area. I specifically cite as an example the city of Reston, which has developed in the rolling hills of northern Virginia and has wrestled with the problems of adequate health care for a period of some five years. In the continued development of our previously developed communities, health services must be a part of the overall activities of this community.

Let us look at some of the factors that affect our state, which is a rural state, and changes which we might anticipate will occur in the next 10 years.

1. There will probably be a declining population in outlying rural areas as a result of population shifts to urban, suburban and rural fringe areas.

2. There will probably be a decline in the number of farm families.

3. There will be rising technology and mechanization in all fields of endeavor.

4. We can probably anticipate industrialization in rural areas, especially in the fringes of metropolitan centers.

5. We can look for health care service area evolution.

6. There will probably be a trend toward larger units of action, school consolidation, church consolidation, multiple county and state-county organization and joint action.

7. There will be a growing dependence on service beyond the immediate locality.

There is great diversity of the rural population in the present day rural community. The occupational structure is changing. Increased intermingling of non-farm rural residents with farm people — increased number of farmers working off their farms — more women employed outside the farm home — greater mobility of all people.

The urbanizing and broadening influences of modern communication media and transportation such as radio, television, newspaper, highways, automobiles, and airplanes touch even the most remote rural family and tend to gradually reduce rural-urban differences in health attitudes, needs, demands and behavior. Nevertheless, differences still exist in rural communities of America as compared with metropolitan centers.

Future trends and outlooks indicate that the changes affecting rural life will continue, in some instances at an accelerating rate. The shift out of farming will continue as well, as more technical advances develop in agriculture. Much of rural America will become mixed-income communities.

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*Presented October 15, 1970 before the Nebraska Hospital Association.

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The school and education will assume an increasingly important role. Adult education will increase. The role of institutions serving the rural community will change, but not decrease in importance.

It is interesting to speculate that it is estimated that only 25-30 percent of our cultivated acres are under irrigation. Some experts state that this number of acres can be doubled and that the probabilities are good that we can triple the number of acres under irrigation. We have also learned that if we were to feed Nebraska grain to Nebraska livestock, we could add $1 billion to the farm income of the state in 10 years.

All these factors enter into what happens to the health services in the next 10 years.

Now, let's turn for a minute specifically to look at what is happening to various areas of health within the state of Nebraska. First, I would like to consider health manpower. Secondly, I would like to look at what we might predict might happen to the hospitals, and thirdly, what happens to the total communities.

There are twelve counties in the State of Nebraska without a physician in residence. This is a total population of 13,780 — the smallest 600, the largest 2,000. Twelve of these counties also have no hospital, eight have no ambulance service, and ten have no first-aid programs. Outside of the two urban areas, there is one board-certified obstetrician and one board-certified pediatrician practicing in the remainder of the state. Of the 1,670 total M.D.'s in Nebraska (there are also 34 D.O.'s) 1,254 are in direct patient care, 225 are interns, residents, and full time hospital staff, 117 are on medical school faculties or administrative and research positions, and 74 are inactive. A total of 589 physicians are in general practice, almost 40% of those in training or actually giving patient care as opposed to the national average of 26%. Twenty percent of the physicians are over the age of 65, fifty physicians are between 70 and 80 and fifty-two are over the age of 80. Older physicians are particularly predominant in North Central Nebraska. The ratio of doctors to population outside the two metropolitan areas is 1:1,592. The total number of physicians in the state is below average and distribution is not at all well-balanced.

The solo practitioner, like the one-room school house, is disappearing from the Nebraska scene — for many of the same reasons. Doctors, like teachers, know when they cannot do the whole job alone. The public is aware of it too, though it is more reluctant to give up the solo doctor's office than the one-room school house. Physicians are tending to band together into integrated practice — groups of doctors with different special interests organized ideally so that each ailment of each of their patients can have the expertise care. This concept provides a shelter for the harrassed physician because responsibilities can be shared — responsibilities for highly specialized knowlege, for round-the-clock services, for time spent on vacation and in continuing education.

Together these physicians believe they can deliver better care, more consistently. In most cases, the public has accepted these health centers just as it does shopping centers. Both offer advantages to the consumer and to those who deliver the goods. Both are here to stay. It is realistic for this trend to continue. Medical schools recruit from the top 20% of the country's students. Such intelligent men and women know when they are spreading themselves too thin. They are not happy when they are not doing all that might be done for their patients and they seek means to correct it. One reaction is to abandon solo practice. This trend has been fired by the demand of the American public for the ultimate in medical care. Today's physician controls a vast array of testing and treating procedures; devices and skills that he, his medical colleagues and his associates in the health sciences can utilize. He requires laboratory facilities, technical assistance, physician colleagues skilled in special techniques and knowledge to practice his profession.

The public has not yet come to realize that in terms of health care, today's doctors can deliver a Cadillac rather than a Model T or a horse and cart. They are getting the equivalent of color TV, but remembering the past, hope to be billed for a crystal set.

The explosion of scientific knowledge within medicine and the resulting need for more expensive, elaborate facilities to render health care and the tendency of health professionals to cluster in urban areas have left the rural resident in a highly disadvantaged position. Nationally, 30% of our population lives in rural areas. Yet only 12% of our physicians, 18% of our nurses, 14% of our pharmacists, 8% of our pediatricians and less than 4% of our psychiatrists are located in those areas.

Clearly, we must have increased numbers of doctors. Their manipulation is medicine's most acute need. But will their increased numbers alone correct the imbalance? Definitely not.

Many of the skills that modern science has brought to medicine do not, in their application to patients, require the broad and deep knowledge of physicians and surgeons. Doctors should only do what they alone can do and train others to do the rest.

In 1900, people were cared for by a doctor and a nurse, or by a doctor alone. Later the doctor began to need technical assistance and it was one patient, one doctor, a nurse, and a technician in the laboratory or in the x-ray department. As scientific knowledge has increased, greater skills have been demanded of those who help the physician, and more and more are needed.

In 1966, an average of about nine individuals, each with different skills, and only one a medical doctor, were often involved in the care of one sick person in the United States. By the end of the 1970's, if doctors and their helpers increase in the rates that they have, the ratio will be about twelve persons per patient. None of these persons will devote his time to one patient or be necessarily in the service of just one doctor. Each will be doing different tasks providing services for many patients and aiding a number of doctors. This development will further force the integration of practice as many doctors and many patients use the skills of many individual experts in a coordinated fashion.

The increased use of allied health professionals offers a great opportunity for improving and expanding rural health care more rapidly and more adequately than by just increasing the number of doctors alone. Among the allied health professionals, we include physician assistants, which we hope to be training next year.

Military service is one area in which we have little control and it has a deleterious effect of taking physician manpower out of the rural areas. It is possible, however, to exert political pressure toward changing the requirement for military service into one which will allow those completing graduate medical programs to select national service in urban ghetto areas or in rural areas rather than service in the military. Many Nebraska graduates would undoubtedly select service in rural areas. After spending two years in a rural community, the physician would be apt to make it his permanent place of practice and residence.

Producing more physicians, in combination with other programs, to provide additional health manpower, will have a most significant effect on the rural health problem in Nebraska. Increasing the number of physicians graduating from medical school can take one of two forms:

1. Increase class sizes, or

2. Decrease the amount of time necessary for training.

During the legislative session of 1969, a new Physician Licensure Act was passed. Several members of the Medical Center faculty had key roles in developing the philosophy of this act and ultimately in testifying before the legislature in behalf of this bill. The act permits the College of Medicine to develop a prescribed course of study leading to the M.D. degree but no longer prescribes the length of time required to complete the course of study or the courses to be included. This is a most significant step in the development of a medical curriculum that will lead to a lesser amount of time needed for medical education and will therefore provide more physicians in lesser amounts of time.

It is the philosophy of the College of Medicine that the required knowledge and skills common to every physician can be acquired in a period less than the traditional four years. This economy in time, which permits earlier career emphasis would be obtained by improved integration of subject areas. Greater opportunities for selection of learning experiences of clinical and nonclinical sciences and greater freedom in arranging an individual course sequence would be afforded the student.

The physician augmentation program which began in June 1970, provides the College of Medicine the ability to accept 20 students in an augmentation class which is designed to produce physicians in three years. At the same time this augmentation class provides an opportunity to design and implement curriculum changes which could be applicable to the entire medical education curriculum. Additionally, this second class will demonstrate the feasibility of different entry times into the medical school program. Varying course sequences without jeopardy of the final product can be observed. The following chart shows the possible consequences in providing physician manpower in a shorter period of time due to these two programs.

PRESENT SCHEDULE
4 years pre-med
4 years medical school
1 year internship
2-4 years residency
13 years TOTAL

FUTURE SCHEDULE
3 years pre-med (including 1 year basic science
2 years medical school (96 weeks)
3 years residency
8 years TOTAL

On February 7, 1969, after over 20 years of gestation there was a new birth in medical education, that being the development of family practice residencies. During these 20 years the AMA Council on Medical Education stated "recognition and status equivalent to other medical specialties must be given to family practice. An appropriate system of specialty certification should be provided for those who have completed approved educational programs and demonstrated their competence as family physicians." On February 7, 1969, this was accomplished.

The family practice residency program is one of the most important accomplishments towards improvement in the provision of rural health care. Family physicians are the keystones to rural health.

At the time of the advent of the American Board of Family Practice and approval of the specialty, there were approximately 20 approved residency programs in general practice. Today we have more than 40 approved programs in family practice.

The University of Nebraska Medical Center, in June 1970, inaugurated its family practice residency program. In addition to the residency program, undergraduate education programs in family practice were put on an equal basis with the other specialties at the Medical Center.

It appears that the family practice venture will be successful for several reasons. The fact is that the interest of the student is keen and genuine. There seems to be several factors that are causing this increase in interest of the students. Their orientation towards career patterns appears different. Many students that previously would have selected pediatrics or internal medicine or psychiatry will probably now go into family practice. Another factor which is increasing the potential for the program is the gradual elimination of the internship and permission of the various specialty boards to enter a residency training program immediately upon completion of medical school.

The AMA Council on Medical Education has been a leader in the development of family practice programs and in the gradual elimination of the internship requirements. The Council attempts to anticipate evolving patterns in medical education and makes recommendations as to how these may be effectively implemented. In addition to the development of the family practice program and the elimination of the internship, the Council has developed the essentials for physician assistant programs and has suggested measures for decreasing the length of undergraduate and graduate medical education programs — all of which will have a significant effect on the rural health problem of Nebraska.

A most critical feature in the ultimate

practice location for a physician is the geographic area in which he pursues his graduate education.

The Nebraska Medical Manpower Study, which was spearheaded by Associate Dean Warren H. Pearse, analyzed how graduate education affected the physicians' ultimate practice location. The years used for the study were 1956 to 1960. In those five years, 40% of the graduates interned in Nebraska and 60% elsewhere; of those interning in Nebraska, 58% remained here in practice and 42% ultimately moved elsewhere. Of those who interned outside Nebraska, less than 20% returned here to practice while over 80% remained outside the state. It was quite apparent that the number of graduate educational opportunities is directly proportional to the number of graduates available to a state.

The University of Nebraska Medical Center has thus, based on this information, expanded its graduate educational opportunities for physicians. In the last few years, we have added 20 internship positions and 90 residency positions for a total of 174 graduate educational opportunities in 1970-71.

1971-72 will bring additional graduate medical educational opportunities. The number of internships will be increased because we have added the following additional hospitals to the internship program: West Nebraska General Hospital and St. Mary Hospital in Scottsbluff, Good Samaritan Hospital in Kearney, Crete Municipal Hospital in Crete and Warren Memorial Hospital in Friend.

I believe that with these efforts, an expanding supply of health manpower will be available in Nebraska.

I should like to make this important point at this time. It is squarely up to the communities as a whole to develop methods of recruitment of this health manpower.

Now let us turn to your field of hospitals. I apologize for spending so much time on health manpower, but that's my "bag."

Let's look at the figures for admission under Blue Cross plans, comparing the Nebraska admissions with the admissions in the total population of the United States. Blue Cross covers aproximately 70 million people, or 1/3 of the total population of the United States. Nebraska has the highest rate of admissions per 1000 members. Physicians admit on the average 190 people per 1000 members as compared to 126 nationally, or almost 15% more admissions in Nebraska than on the national average.

What do these statistics mean? I might give an additional one — *does Nebraska have too many hospital beds?* Statistically speaking, Nebraska has 4.5 short-term, non-federal general beds per 1000. Nationally, it is 3.8. In the Omaha-Council Bluffs area, we have 5.8 beds per 1000 population. We must ask ourselves the question — is it really necessary for this number of people to be hospitalized? Or is there an alternative to this?

The present trend of practice is to diagnose and treat the patient as much as possible with his shoes on rather than with his shoes off, being horizontal in bed. Certainly I think this change will lead to a lesser need for hospital beds if we all become involved in a program — by "all," I mean the patients, the physicians and the hospital administrators — in an effort to do the hospital out of some of its business, so to speak.

I had mentioned somewhere back of the need for public involvement. What I am referring to is the education of the public in medical matters and our becoming increasingly interested in the concept that the education of the public in health service matters may well turn out to be the single most productive action we can take to bridge the so-called gap between demonstrated need and available resources. We realize that there has been a tremendous ineffectiveness when we try wholesale or mass application for provision of health services. A significant proportion of this ineffectiveness can be attributed to social and intellectual culture and geographic factors. *Money* alone, it is quite clear, cannot bridge this gap or overcome this ineffectiveness. If the public could become informed enough to have realistic expectations about health services, to know how to gain access to available services and then to know how to use it, *I am convinced* we would have accomplished far more than we are contemplating when we speak of doubling the number of doctors and producing tens of thousands of allied health personnel to service today's openminded utopian promises, as represented by many plans proposed by various groups in Washington.

Considering today's social and political realities, would it not be more constructive to seek out these needs and wants, then to try to meet them logically and sensibly within the limits of our professional and scientific capabilities? Working with individuals and groups in order to dig out this information is time consuming, but it is also educational for all as we try to develop our answers to problems and deficits defined.

I had originally intended to speak also about government medical programs which at the present time cover a large percent of our population. I would only say that during the '70's there will undoubtedly be devised many more federal programs which will bedevil you.

It is also *necessary to predict* that hospital administrators will have to be licensed by a state board. This almost occured in 1968 in the Social Security Amendments of 1967, and I am certain that the proponents have not forgotten.

I have often said the hospital today is a contradiction.

On the one hand, hospitals are expected to expand and modernize their physical facilities, purchase the latest equipment, increase salaries and wages of employees (both skilled and unskilled) to compete with industry in the labor market, admit masses of patients without questioning their ability to pay for the services they need, and treat an ever-increasing stream of people in the emergency room without even finding out who they are, much less how much (or if) they can pay.

On the other hand, we know hospitals are expected to keep charges down to the bare minimum, balance revenue and expenses, set aside large sums for depreciation of buildings and highly technical and expensive equipment, pay for their own development programs, and keep separate records for Medicaid, Medicare, Blue Cross and other third party payees.

These hospitals must also keep additional records for state, county and local licensure agencies, the Joint Commission on Accreditation of Hospitals, Professional Activities Service, Hospital Administrative Services, and others; and then join hands with other hospitals, physicians, nursing homes, health departments and community groups to plan programs that will provide the most effective methods of furnishing medical care and services in less expensive alternatives for general hospital care.

In other words, these hospitals have to strive to empty as many beds as possible — beds that they must keep filled in order to earn the revenue to perform all, or even some of the things I just mentioned.

The truly extraordinary thing about this whole situation is not just that it actually exists, but that most hospitals, confusing and contradictory as the situation is, are actually doing all, or some, of these things I have just enumerated.

Eventually, all hospitals will have to meet not only these expectations, but a multitude of others we have not even thought of.

To summarize, we have tried to say:

1. Methods of increasing health manpower are developing and communities must recruit these people.

2. All of us must be concerned with hospital utilization and in developing methods of diagnosis and treatment outside the hospital beds.

3. Changes for the '70's will revolve around an increased role of government, changes in the economic characteristics of our state, and the community response to comprehensive health planning.

Hemostasis —

II. The Use of Factor VIII Concentrates In the Therapy of Hemophilia

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HEMOPHILIA was recognized in the second century A.D.,[1, 2] and has significantly influenced the history of the twentieth century.[3] The earliest known attempt to control bleeding by transfusion in a patient with probable hemophilia was singularly successful,[4] but until recently hemorrhage in classic hemophilia often was difficult to control, and major surgical procedures were associated with a mortality of over 50%. During the past 15 years, the management of hemophilia has been changed radically by the availability of several preparations of antihemophilic factor (AHF, factor VIII) of high potency. The use of one such preparation, cryoprecipitate, in the management of a hemophilic cyst is described in this report, and its properties and usefulness compared with other commercially available preparations.

Case Presentation

A 32 year old white male was referred because of a draining hematoma of the left thigh. The patient had been known to have a hemorrhagic diathesis since the age of three, at which time he began to have recurrent ecchymosis and hemarthrosis, especially of the lower extremities. The patient had one brother with hemophilia, two healthy sisters, and one brother who died at 16 months of age of unknown cause. The patient had repeated episodes of hematuria, occasional nosebleeds, and had bled excessively after tooth extractions. At age 10, the patient was found to have factor VIII deficiency, and at age 11 had had tetanus. At age 13, he had fractured his right leg. The fracture healed, but a residual ankylosis of the knee joint remained, and subsequently he was confined to a wheel chair.

At age 27, he fractured his left femur. About two years later, he noted intermittent swelling and tenderness of the posterior aspect of the left thigh, for which no treatment was given.

Six months prior to admission, the patient began to have considerable pain in the thigh, persistent swelling, and ecchymotic areas appeared. Five months before admission, chocolate brown material was aspirated from one such area. The site drained and appeared to heal. Several such aspirations of the thigh then were done, but subsequently two necrotic areas developed, and bleeding sinus tracts appeared. In the three months prior to admission, he was given one unit* of cryoprecipitated factor VIII three times weekly, 3,000 cc of whole blood, and had developed an infection of the hematoma with a fever to 105°F requiring antibiotic therapy.

On examination, the patient was a white male in no distress; his temperature was 99.8°F and the blood pressure was 126/74. Physical findings were unremarkable except for flexion deformities of both knees and elbows, and brawny swelling of the left thigh with necrotic appearing areas. There were three sinus tracts filled with clotted blood, two being on the posterior thigh, which were bleeding slowly but continuously. (Fig. 1).

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*The term "unit" of cryoprecipitate is synonymous with the amount of the cold insoluble fraction of plasma contained in one blood bag and prepared from 500 ml blood. The actual volume varies from 10 to 30 ml or more, depending on the method of preparation. The term "unit" of factor VIII refers to the factor VIII activity of 1 ml of fresh plasma from a pool of normal donors.

Initial laboratory examination showed: Hemoglobin 6.8 gm%, leukocytes 8,800 with 74% granulocytes, 17% lymphocytes, 6% monocytes, and 3% eosinophils. The platelet count was normal on smear, the MCV 61 μ^3, the MCH 20 $\mu\mu$gm, and the MCHC 33%. The urine was unremarkable. A wound culture grew proteus mirabilis. The one stage prothrombin time was 12.8 seconds, the partial thromboplastin time 226 seconds, and the factor VIII level <1%. Investigation for factor VIII antibodies was negative. X-rays showed evidence of a fracture deformity adjacent to the knee joint, soft tissue swelling, and periosteal elevation believed to be secondary to subcortical hemorrhage of the proximal femur (Fig. 2).

The hospital course is depicted in Fig. 3. Immediately after a single infusion of 8 units of cryoprecipitate, the factor VIII level was found to be 35%. He received daily infusions of cryoprecipitate for the following 10 weeks. After cryoprecipitate was begun, the amount of blood loss diminished considerably. Drains and hydrogen peroxide irrigation

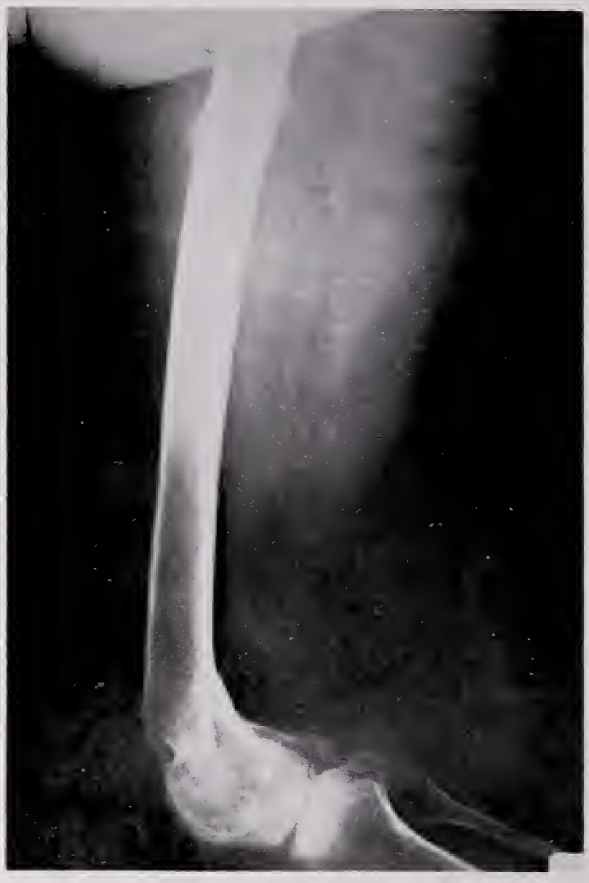

Figure 2. X-ray of the left thigh, showing evidence of an old fracture of the femur distally, and periosteal elevation and a large soft tissue mass proximally.

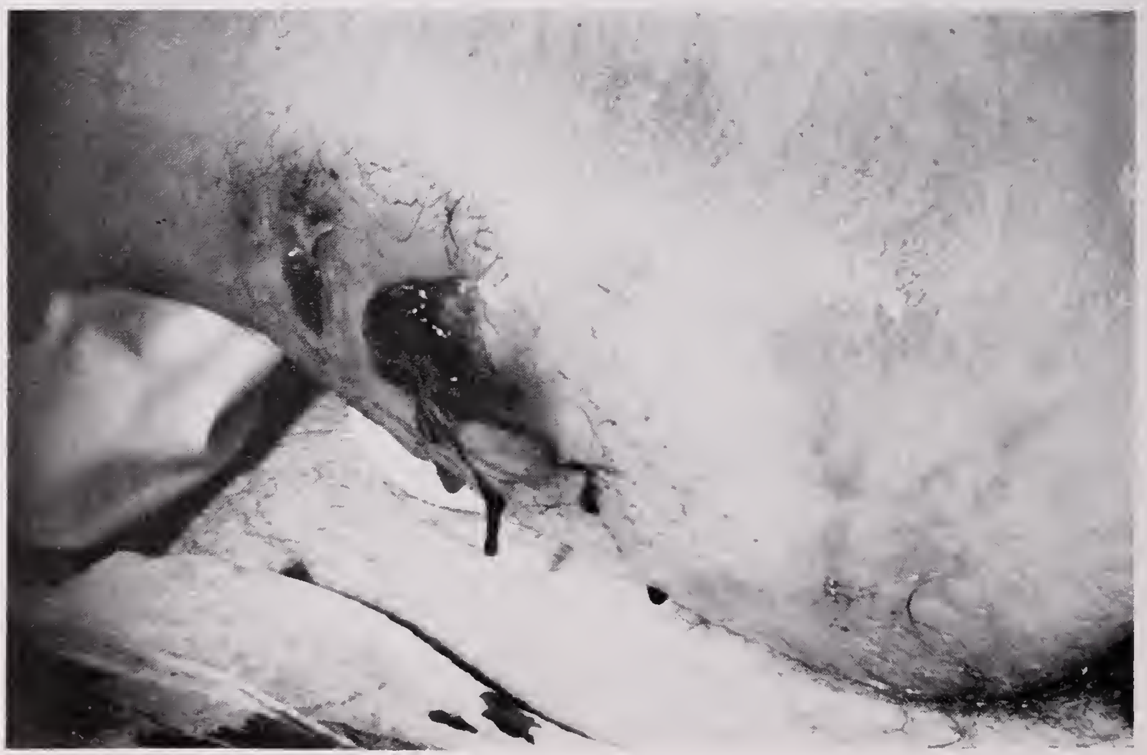

Figure 1. Posterior aspect of the left thigh showing two bleeding sinus tracts containing blood clots. Swelling, induration, and discoloration of the thigh is apparent.

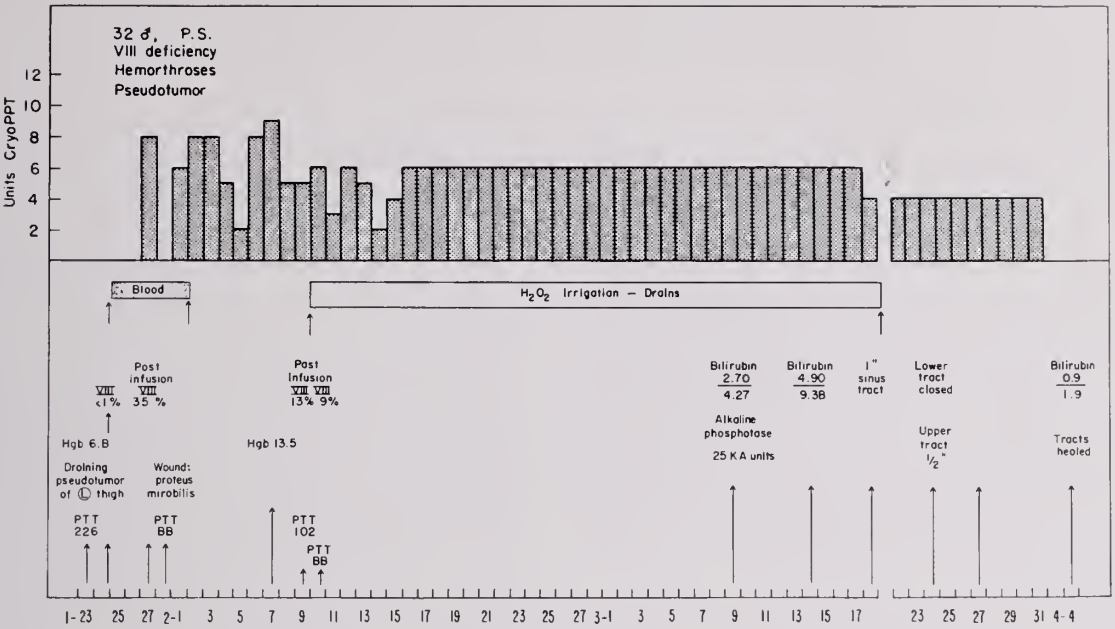

Figure 3. Diagramatic representation of patient's course in hospital. Infusions of cryoprecipitate are depicted above, and selected laboratory values below. Cryoprecipitate therapy was continued from March 17 to 23 although the chart is interrupted.

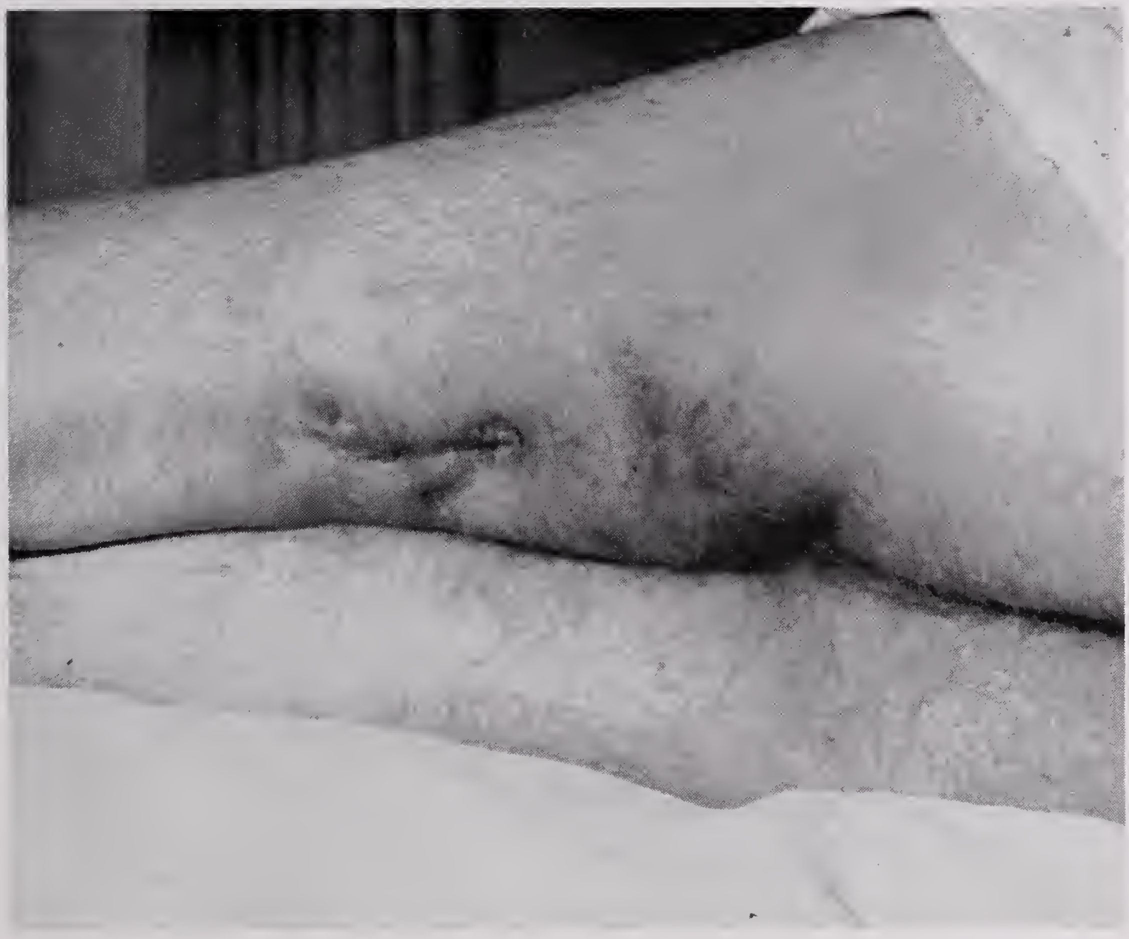

Figure 4. Left thigh showing sinus tracts after healing.

of the hematoma were employed for approximately six weeks, after which the three sinus tracts healed. (Fig. 4).

On the 45th hospital day he developed anorexia and dark urine. The conjugated and total bilirubin levels were elevated, the alkaline phosphatase 25 (Fig. 3), and the SGOT rose from 101 to 240 units. Temperatures of up to 104°F had been recorded during the first week of hospitalization. Thereafter, he remained afebrile until hepatitis developed at which time the temperature was between 99 and 102°F. At discharge, the bilirubin had decreased to 0.9/1.9 mg%. The patient was hospitalized a total of 74 days and received 320 bags of cryoprecipitate.

Comment

Fresh frozen plasma has been a mainstay of therapy in classic hemophilia for many years. It remains a useful preparation if bleeding is limited, e.g., for hemarthroses or minor tooth extractions, or when concentrated forms of factor VIII are not immediately available. In recent years, factor VIII concentrates have been used, and have revolutionized the management of hemophilia. Both human and animal factor VIII concentrates have been available in England for many years.[5, 6] Cryoprecipitate and freeze-dried preparations of human factor VIII relatively poor in fibrinogen have been in use in this country since about 1965.[7, 8] Because there is a ready supply of porcine plasma, and because pig (and bovine) plasma have about eight times the content of factor VIII as human plasma, animal plasma has great potential usefulness. These materials are antigenic, however, and lose their effectiveness after about ten days. For that reason, and because of the danger of the possible introduction of animal disease into this country these preparations have been almost entirely excluded from patient use in the United States, but are presently used in England.

The antihemophilic globulin concentrate from a cold insoluble fraction of human plasma (cryoprecipitate) is prepared by freezing fresh plasma at -60 to -70°C, followed by thawing at 4°C. After thawing, the supernatant plasma is removed, leaving 15± ml of cloudy precipitate which is then frozen. The red cells, and remaining plasma can be utilized for other purposes. Certain properties of cryoprecipitate are shown in Table 1, and are compared with fresh plasma and freeze dried (glycine precipitated) fractions. Cryoprecipitate is most useful because of its relative ease of preparation and availability from local blood banks, because of its storage stability (at least one year) and relative freedom from side effects. A major disadvantage of cryoprecipitate is the variability in factor VIII content of each bag of cryoprecipitate and the relatively poor recovery of factor VIII. Pool and Shannon[7] have reported that about 65% of the factor VIII activity of fresh frozen plasma is present in a unit of cryoprecipitate. Others[9] have reported lesser yields of factor VIII activity, and a useful guide is to consider that

Table 1

CHARACTERISTICS OF PLASMA FRACTIONS RICH IN FACTOR VIII COMPARED TO FRESH FROZEN PLASMA

	Volume	Factor VIII Activity (Units)	Cost*	Cost/Unit Factor VIII
Fresh Frozen Plasma	240 ml/unit	About 200	$10	Approximately 5c
Cryoprecipitate	Approximately 30 ml/bag	Approximately 100/bag	$15	Approximately 15c
Hemofil (Hyland Laboratories, Los Angeles)	8 ml/vial	180/vial	$35	19c
Courtland AHF** (Division of Abbott Laboratories, N. Chicago, Ill.)	25 ml/vial	235/vial	$40	17c

*Current cost to the University of Nebraska Hospital.

**Lyophilized preparation of cryoprecipitate.

one bag of cryoprecipitate will have about one half the activity of 250 ml of fresh frozen plasma. Thus, when factor VIII for minor bleeding in an adult is indicated, short term administration giving 1 to 2 bags of cryoprecipitate at each infusion should be avoided.

Assuming a 50% recovery of factor VIII compared to fresh frozen plasma (FFP), the cost of cryoprecipitate is about three times that of FFP for a given amount of factor VIII administered to the patient (Table 1). If long term therapy or the use of large volumes of plasma are required, however, cryoprecipitate, or another concentrated form is indicated, to avoid hyperalbuminemia, hypervolemia, and possible cardiac failure. When indicated, one should give about 1 unit of cryoprecipitate per 6 kg body weight, to obtain a factor VIII level of 51±23% of normal.[10] This is more than is required for minor bleeding.[11] Because the potency of each bag of cryoprecipitate is not known in advance, the rise of the factor VIII level in the patient should be determined. Factor VIII assays are available in only relatively few hospitals, however the near-normalization of the PTT, 10 minutes after infusion of cryoprecipitate may serve to indicate that the patient has received a suitable amount of factor VIII.

By contrast, the factor VIII activity of the commercial freeze dried preparations is assayed in advance. In the absence of massive hemorrhage or circulating antibodies which neutralize factor VIII, the rise of factor VIII levels in a given patient can be predicted with reasonable certainty. Four units of factor VIII/kg raise the level of factor VIII approximately 10%. Both cryoprecipitate and the freeze dried preparations may convey hepatitis, as shown in this case, and there is evidence that concentrated preparations of factor VIII may be associated with a risk of hepatitis which is greater than that of FFP.[12]

Despite the considerable cost of concentrated factor VIII, these preparations have greatly improved the control of serious hemorrhage in hemophiliacs and have made elective surgery possible. Fresh frozen plasma will not provide adequate hemostasis during and after surgical procedures in severe classic hemophilia. It is, of course, mandatory that the specific coagulation factor deficiency be identified, for cryoprecipitate and factor VIII concentrates contain negligible amounts of factor IX. Furthermore, patients who have a low factor VIII level with von Willebrand's disease should be identified and treated with cryoprecipitate, in preference to commercial factor VIII concentrates. Cryoprecipitate but not commercial preparations is a source of the bleeding time factor lacking in von Willebrand's disease.

Recently, concentrated preparations of factor IX† have become available, which has greatly assisted in the control of Christmas disease.[13, 14] The concentrated factor VIII preparations also have been used to control bleeding in patients with antibodies for factor VIII,[15] and to a limited extent in trials of prophylactic therapy of hemophilia.[16, 17] One such patient[16] received a total of 25,408 units of factor VIII in a three-month period.

Our patient presented with a hemophiliac cyst or pseudotumor, a complication which occurs in one to two percent of patients having severe factor VIII or factor IX deficiency.[11] These lesions result from long-standing hemorrhage in a muscle mass, particularly in the lower extremities and pelvis where there are rich vascular connections with underlying periosteum and bone. The lesions may be associated initially with subperiosteal hemorrhage. This patient had repeated hemorrhage into his thigh for three years, and finally had chronic sinus formation with infection of the lesion. These complications, as well as pain and pressure on vital structures, may necessitate surgical extirpation of the lesion.[18] Surgical extirpation, however, was associated with a 65% mortality, before concentrated forms of factor VIII were in wide use.[18] The surgical mortality associated with resection now is probably about 15%,[9] however, the morbidity and the requirements for replacement therapy are substantial. It is of interest that infection in this patient was controlled by reducing the rate of bleeding, and by local irrigation of the wound, without using antibiotics. Conservative management of these lesions has been employed before[19] and cyst enlargement has been controlled by prophylactic therapy.[17] The lesions may recur, however, and because management may be difficult and expensive once a cyst develops, hemorrhage involving deep muscle masses or bony periosteum should be treated vigorously.

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Summary

Concentrated preparations of factor VIII (AHF) are now available for use in the treatment of major bleeding episodes in hemophiliacs. These include plasma cryoprecipitate, and lyophilized products which are commercially available. The use of cryoprecipitate in the conservative management of a patient with a hemophiliac cyst has been discussed.

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Physicians on Hospital Governing Boards

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AT the 1970 Annual Convention of the AMA House of Delegates, the AMA Board of Trustees reported on implementation by the Joint Commission on Accreditation of Hospitals of AMA policy regarding physician representation on hospital governing boards. Report K of the Board reads as follows:

> The Board of Trustees is happy to report that the policy established by the House of Delegates that:
>
> > "Where feasible or where possible, physicians who are either elected, appointed or nominated by the medical staff and who are willing and able to serve, should be voting members of hospital governing boards."
>
> has been implemented by the Joint Commission on Accreditation of Hospitals.

The revised Standards for Hospital Accreditation, as adopted April 25, 1970, by the Joint Commission, contains the following language in its interpretive material:

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> "Where legally permissible, physicians who are members of the medical staff shall be eligible for and should be included in membership on hospital governing bodies in the same manner as are other knowledgeable and effective individuals. Other physicians also should be considered eligible for membership on the governing body."

> While this interpretive language makes eligibility mandatory where legally permissible, the actual appointment of medical staff members to the governing board is permissive since the word "should" in the glossary of definitions of the JCAH is a: "Term used in the interpretation of a standard to reflect the commonly accepted method yet allowing for the use of effective alternates."

It is not expected that the revised Standards of the JCAH will become effective prior to mid-1971. However, there is evidence that physicians are being welcomed with increasing frequency to membership on hospital governing boards.

At the joint meeting of state hospital and medical society representatives that was held in Chicago in February and March of 1969 to discuss an earlier draft of the Standards, a number of hospital people stated that they would welcome physicians on their governing boards.

The reasons are quite plain. Hospitals, today, are involved in a wide variety of programs where decisions cannot be logically reached without the advice of physicians. To name but a few, these include Regional Medical Programs, comprehensive planning, Medicare and Medicaid. When a hospital is planning its role in effectively delivering health services to a community, it would seem that its medical staff must be intimately involved, not just because physicians more than any other group have a concerned awareness of the medical needs of the community, but because physician advice may prevent costly errors in the planning, development and operation of new facilities and services.

Another reason for medical staff representation on hospital governing boards stems from corporate responsibility of the hospital for the quality of the medical care delivered in the institution. The measure of the degree to which the hospital fulfills this responsibility is twofold. First is effectiveness of its organized medical staff to provide the necessary supervision essential to the maintenance of high quality medical care. Second is the excellence of hospital management. And as was stated in the 1964 Report on Physician Hospital Relations:

> "the excellence of hospital management is not solely the responsibility of the governing authority and administration. The medical staff is responsible for much of the hospital's income and expense; therefore, it must be concerned with, and share responsibility for, the quality and efficacy of the total management of the hospital."

Physicians cannot remain aloof from the hospital management structure. All too frequently, the nonpresence of a member of the medical staff on the governing board of a hospital is because the medical staff has not requested representation. This is one fact of the problem that I hope medical staffs everywhere will rectify.

The Council on Medical Service reported at the 1970 Annual Convention on the existence of physician representation on hospital governing boards. In a 1969 survey it conducted, with 976 general hospitals responding, 47% indicated that members of the medical staff were on the governing board.

The hospitals studied were randomly selected from the universe of short-term general hospitals. About one in every five of these hospitals was included in the study. Thus, I can believe it can be stated that the policy of the AMA is receiving wide implementation.

At this point, I think it should be noted that the policy of the American Hospital Association has long been that "Members of the medical staff can be members of the hospital governing board." This was a position taken by the AHA Board of Trustees in 1953 when it joined with the AMA Trustees in a joint statement on physician-hospital relations. Governing board membership was one of four listed alternatives to insure that the medical staff has access to the governing board.

It is this question of access or the assurance of effective communication between the governing board and the medical staff that is of prime importance today, perhaps of even greater importance than it was in 1953.

It is the policy of the American Medical Association that this liaison, this communication, is most effectively carried out when an elected representative of the medical staff is on the governing board.

The Practical Approach to the Investigation of the Hypertensive Patient*

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PERSISTENT elevations of the blood pressure that are above 140/90 mm systolic and diastolic, respectively, should be regarded as abnormal — criteria that correspond with the established definition of the American Heart Association. If by the application of these criteria the patient is found to be hypertensive, the severity of the hypertension should be graded as an aid in making the immediate decisions and in estimating prognosis.

Grading the Severity of Hypertension

The ocular fundus represents a sensitive mirror of the severity of hypertension. The Keith - Wagener - Barker classification separates patients into groups 1 to 4, with group 4 being the most severely affected. Group 4 is characterized by papilledema; group 3 by exudates, and group 2 by hypertensive sclerosis of grade 1+ or more of the retinal arterioles. At times, group 2 hypertension may involve severe sclerosis and hemorrhages but may lack the exudates that are hallmark of group 3 hypertension. The mildest form of fundic changes is sclerosis of grade 1 or less of the retinal arterioles. However, in certain types of hypertension of recent origin, there may be severe narrowing of the retinal arterioles and extensive focal constriction but no hypertensive sclerosis because the sclerosis has not had time to develop. Thus, such patients may be in group 1 and yet may have severe hypertension.

Years ago, Keith, Wagener, and Barker[1] established that patients with group 4 hypertension (those with papilledema) have an extremely poor prognosis. The prognosis for patients with group 3 hypertension is not much better (Fig. 1). Furthermore, it has been shown that, even when sympathectomy was the only available method for treating hypertension, therapeutic intervention could alter the malignant course of this disease. Subsequent studies (a follow-up of patients with hypertension by Breslin et al[2]) have confirmed this poorer outlook for patients with groups 3 and 4 hypertension and have established that male patients with group 2 hypertension also have reduced survival. Although the outlook in Breslin and associates' study for women with group 2 hypertension and for men and women with group 1 hypertension is less distinct from that of the normal population, the survival curves are not superimposed (Fig. 2).

Establishing the Type of Hypertension

In addition to grading the severity of the hypertension and separating patients into different groups, it is helpful to establish whether the cause of the hypertension is known (secondary) or unknown (essential).

Essential hypertension may be labile, being present at times and absent at others, or may be fixed, with persistent elevation of the diastolic blood pressure. Some older patients have elevation of the systolic blood pressure alone without elevation of the diastolic blood pressure, and it is questionable whether the cause of this type of blood pressure elevation is the same as that of essential fixed diastolic hypertension.

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*Read at the meeting of the Nebraska State Medical Society, Lincoln, April 28 to 30, 1970.

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Causes of Secondary Hypertension

The causes of secondary hypertension can be classified as renal, endocrine, and other (Table 1). Renovascular is the most common type of renal hypertension. Such hypertension may be atherosclerotic or fibromuscular in origin, or the origin may be parenchymal renal disease. There are, however, other rare causes of renal hypertension; these include renal arteriovenous fistula, renal vein thrombosis, and renal compression due to a hematoma from blunt trauma sustained, for example, during a football injury or an automobile accident.

Of the endocrine causes of hypertension, the possibility of a pheochromocytoma (although rare) must be excluded to avoid catastrophes at elective surgery. This lesion offers the satisfaction of a curable form of hypertension. Primary hyperaldosteronism (Conn syndrome) is likewise of adrenal origin; the true incidence of this condition is unknown. Other endocrine disorders are Cushing's syndrome and the rare forms of adrenal hypertension due to enzymatic defects that result in an excess production of mineral corticoids and inadequate production of glucocorticoids. The thyroid may be implicated in hypertension both through hyperfunction and hypofunction. Occasionally, acromegaly is associated with hypertension.

Rare causes of hypertension that are nonrenal and nonendocrine include coarctation of the aorta, periarteritis nodosa, scleroderma, and lesions of the central nervous system. In order that the occasional coarctation will not be missed, palpating of femoral pulses should be done in every patient who has elevated blood pressure readings. Periarteritis nodosa should be considered in hypertension when there is evidence of multisystem disease and peripheral neuropathy of the mononeuritis multiplex type.

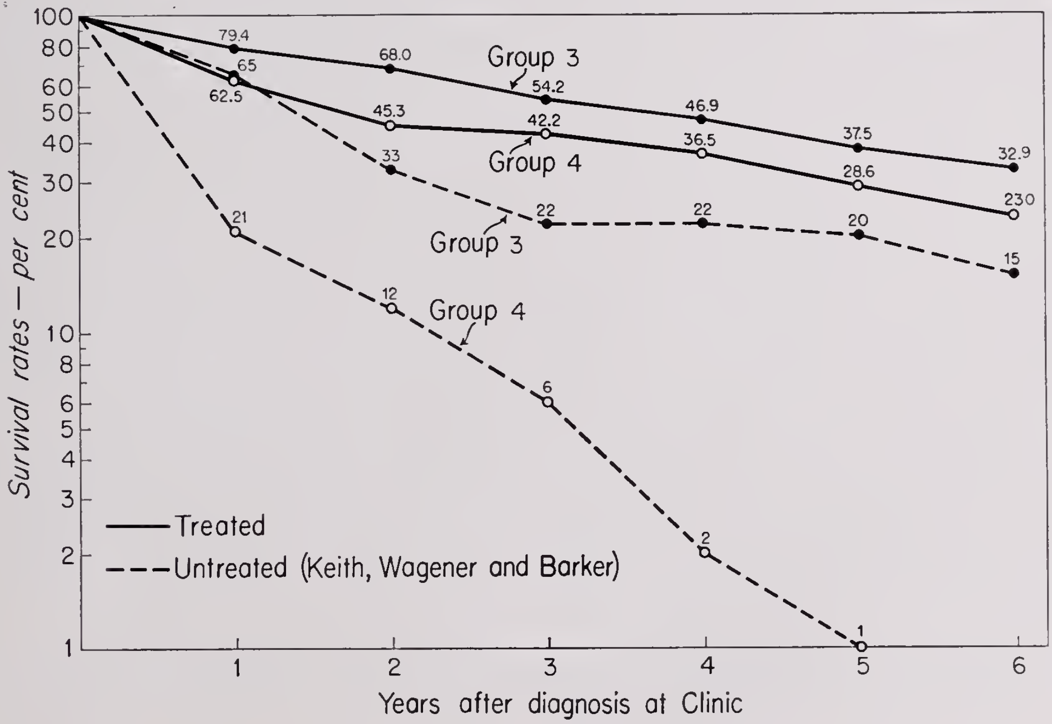

Figure 1. Survival curves for patients with group 3 and group 4 (Keith-Wagener-Barker) essential hypertension. (From Farmer, R.G.; Gifford, R. W., Jr., and Hines, E. A., Jr.: Effect of medical treatment of severe hypertension: a follow-up study of 161 patients with group 3 and group 4 hypertension. Arch Intern Med (Chicago) 112:118-128 (July) 1963. By permission of American Medical Association).

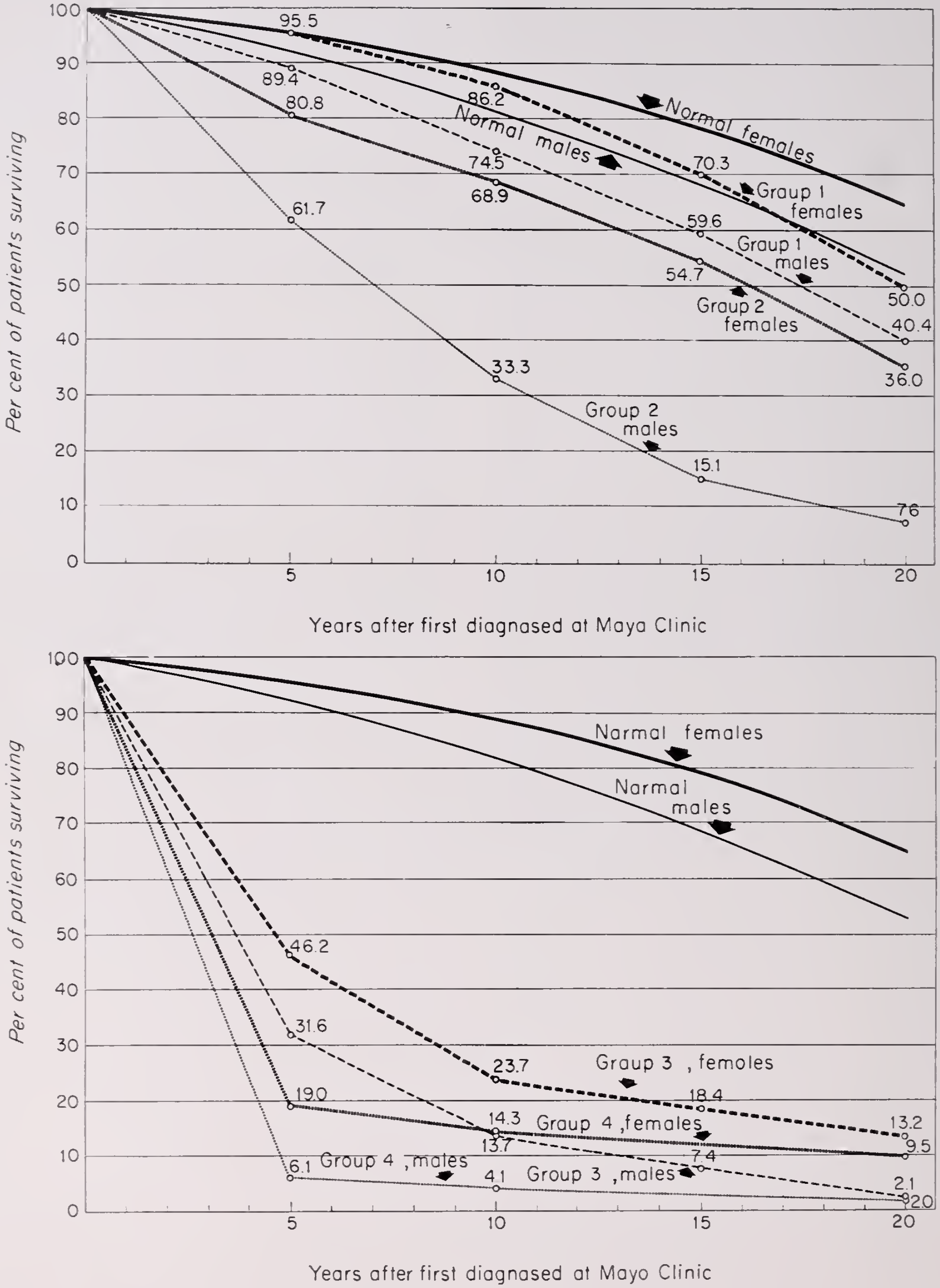

Figure 2. Survival curves in essential hypertension (groups 1-4, Keith-Wagener-Barker) according to grade and sex. UPPER, Groups 1 and 2. LOWER, Groups 3 and 4. (From Breslin, D. J.; Gifford, R. W., Jr., and Fairbairn, J. F., II: Essential hypertension: a twenty-year follow-up study. Circulation 33:87-97 (Jan) 1966. By permission of American Heart Association, Inc).

Checking Evidence for Secondary Hypertension

Once hypertension has been established, the degree of severity estimated, the patient grouped according to the Keith-Wagener-Barker classification, and an etiologic classification considered, the evidence for secondary hypertension should be checked.

Historical Factors — The patient's history can be productive both to the patient and to the physician. Although the family history does not exclude the possibility of secondary etiology of hypertension or establish the essential nature of hypertension, it is helpful in that if there is a family history of hypertension one would view even moderate elevations of blood pressure with more prognostic concern than if there is no family history of hypertension.

The duration of the hypertension is sometimes difficult to establish, but if there is evidence that after recent normal blood pressure readings a definite diastolic hypertension is present, one should strongly suspect a secondary cause. This history will often offer a slight clue to the various forms of secondary hypertension. The patient with renal artery stenosis uncommonly describes the classic findings of flank pain, renal colic, and hematuria; the presence and subsequent appearance of hypertension strongly point to the possibility of renal infarction. Likewise, the patient with pheochromocytoma will often give clues to the diagnosis well in advance of the pertinent positive laboratory tests. Care should be given to the description of the attack; the characteristic findings of episodic blood pressure elevation associated with severe headaches, sweating, and marked pallor in addition to tachycardia certainly offer strong suggestion that a pheochromocytoma may be present. Likewise, the patient with the Conn syndrome may complain of excessive muscular weakness, polydipsia, polyuria, and nocturia, and in a patient who is not receiving thiazide diuretics, this should offer a clue to the possibility that primary hyperaldosteronism may be present. In addition to searching for possible clues to secondary hypertension, it must be established whether the hypertension is symptomatic and whether it has affected through its long-term atherogenic deleterious effects various vascular beds in the body. A search should be made for clues of intermittent cerebrovascular insufficiency or decreased cardiac reserve and for echoes of ischemic heart pain. An investigation of the patient's previous treatment should be made in order to avoid unnecessary duplication, to clarify previously questioned data, and to determine whether a certain procedure may have had an inappropriate response by the patient (for example, an allergic reaction to the dye after excretory urography). The type of treatment (if any) that the patient has had in the past should be established, as well as the corresponding response of the blood pressure to the previously prescribed therapeutic regimen.

Table 1

CLASSIFICATION OF SECONDARY HYPERTENSION

- Renal
  - Renovascular
    - Atherosclerotic
    - Fibromuscular dysplasia
  - Parenchymal
  - Rare
    - Renal arteriovenous fistula
    - Renal vein thrombosis
    - Renal compression
- Endocrine
  - Pheochromocytoma
  - Aldosteronoma
  - Cushing's disease
  - Thyroid dysfunction
    - Myxedema
    - Hyperthyroidism
  - Acromegaly
- Other (rare)
  - Coarctation
  - Periarteritis nodosa
  - Scleroderma
  - Lesions of central nervous system

Physical Findings — In addition to maneuvers that are common on a routine physical examination, the blood pressure in both arms should be checked. In this way, atherosclerotic occlusive lesions in the region of the subclavian artery will be detected, and the occasional patient with a previous aortic dissection that has healed and is asymptomatic may be found.

Examination of the ocular fundus is an extremely helpful procedure in classifying the hypertension and giving prognostic guidelines.

Cardiac auscultation of course is part of any physical examination and may offer clues to early diminishing cardiac reserve or impending congestive heart failure on the basis of hypertensive heart disease.

The one sign of renal artery disease is the detection of the bruit over the abdomen or rarely in the flank or the posterior thorax. If continuous and if located in the epigastrium, in the center, or more commonly on the right or left side, the bruit offers a strong suspicion that the hypertension is due to fibromuscular renal artery disease; in our experience, careful auscultation has revealed that most patients with this condition have continuous bruits.[3]

Every patient with hypertension should have careful palpation of the femoral pulses, because this is the only way that aortic coarctation will be detected.

In addition to these common maneuvers, the physician should be alert for physical clues of systemic disease that may be associated with hypertension (myxedema, hyperthyroidism, or scleroderma).

Additional Testing — Laboratory tests are useful in the investigation of the hypertensive patient (Table 2). Not every patient should undergo all of the tests that are listed and only a few patients will require the most sophisticated ones. In addition to estimating the renal reserve from urinalysis, blood urea value, serum creatinine level, and creatinine clearance, the cardiac size should be established by use of roentgenograms of the thorax; and the possible presence of left ventricular hypertrophy or left ventricular strain or both should be determined by the use of the electrocardiogram. It is much easier to obtain the value for serum potassium prior to instituting therapy with a thiazide diuretic, and thus with reasonable certainty exclude the presence of hypokalemic primary hyperaldosteronism, than to wonder about this condition after the serum potassium level has fallen following institution of the thiazide diuretic. If the patient is less than 60 years old, an excretory urogram should be done during the course of the investigation. When this procedure is properly timed after the dye injection, significant clues can be found with regard to the presence of renal artery stenosis. The determination of urinary metanephrines is a sensitive test of the presence of a pheochromocytoma, when done on a 24-hour urine sample. This determination should be done on all hypertensive patients. It is particularly useful to know whether a pheochromocytoma is present if the patient is to have elective surgery. A rare patient will require other tests, such as determination of plasma pressor amine and glucagon stimulation to confirm the diagnosis of pheochromocytoma.

Table 2

USEFUL EXAMINATIONS IN EVALUATION OF HYPERTENSIVE PATIENTS

1. Urinalysis
2. Blood urea
3. Serum creatinine
4. 24-hr creatine clearance
5. Roentgenograms of chest
6. Electrocardiogram
7. Examination of ocular fundi
8. Serum K+, CO^2, Na+, Cl—
9. Excretory urogram (rapid sequence)
10. Urinary metanephrines (24 hr)
    Plasma pressor amines
    Glucagon stimulation test
11. Radiohippuran renogram
12. Renal arteriogram
13. Renal vein renin determination
14. Differential renal function studies
15. Plasma cortisols
16. Serum thyroxine
17. Studies for clues to scleroderma
18. Muscle biopsy

The excretory urogram is used to screen patients for the presence or absence of renal hypertension. In patients who are allergic to the dye, a radiohippuran renogram offers the second best choice for screening, because allergic phenomena are only rarely encountered when a small amount of iodine is used.

The final test to establish the presence of renal artery stenosis is the renal arteriogram. In order to establish the functional significance of an anatomically, demonstrated lesion, determination of renal vein renin is done after appropriate preparation. Thus, one can determine whether the renal artery stenosis is related to the hypertension. In some patients, further data may have to be obtained from differential renal function studies. In patients who have unusual forms of adrenal or endocrine hypertension, other tests may be necessary, such as determinations of plasma cortisol and of urinary 17-hydroxysteroids and 17-ketosteroids and the measure of thyroid function such as the serum thyroxine level. In the patient suspected of hyperthyroidism, uptake of ^{131}I over the thyroid gland at 6 and 24 hours should be done. In patients suspected of having scleroderma, roentgenography of the hands, radiographic studies of the upper and lower gastrointestinal tract, or special motility studies of the esophagus may be done to substantiate the diagnosis. The patient with multisystem disease and hypertension may need a muscle biopsy to establish early in the course of the disease whether periarteritis nodosa is present.

An important question concerns the selection of patients who should be subjected to renal arteriography in the detection of renal artery stenosis (Table 3). All patients with groups 3 and 4 hypertension and well-preserved renal function should undergo this study, as should patients with persistent diastolic hypertension of groups 1 and 2 who are less than 40 years old. Other helpful clues are disparity of more than 1 cm in the size of kidneys on the excretory urogram, history suggestive of renal infarction, recent onset of severe hypertension, and, in a previously known hypertensive patient, altered responsiveness to previous successful medical therapy. Furthermore, if renal hypertension is detected, and documented by renal arteriography, but conservative management is decided on, follow-up arteriography may be necessary at 2- to 3-year intervals to reevaluate the status of the renal circulation.

Table 3

INDICATIONS FOR RENAL ARTERIOGRAPHY IN HYPERTENSION

1. Group 3 or 4 hypertension
2. High diastolic hypertension in patient of group 1 or 2 less than 40 yr old
3. Disparity in size of kidneys (more than 1 cm) on excretory urogram — if severity of hypertension warrants
4. History of renal colic or hematuria
5. Documented recent onset of severe hypertension
6. Altered responsiveness to previously successful medical therapy
7. Follow-up of previously documented renal artery stenosis

Summary

The practical approach in investigating the hypertensive patient (persistent elevations of blood pressure above 140/90 mm) involves grading the severity, establishing the type (primary or secondary), and determining the cause (renal, endocrine, or other). Once hypertension has been established, evidence for secondary hypertension should be checked by collecting data from the patient's history and physical examinations, and from additional tests. The additional tests include some that are routine and simple as well as the more sophisticated types such as renal arteriography.

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Hemodynamic Effects of Cardiac Arrhythmias*

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RECENT advances in intensive cardiac care and widespread use of continuous electrocardiographic monitoring have emphasized the frequency and nature of cardiac rhythm disturbances. Recognition, however, requires at least a consideration of therapy. Proper therapy is predicated on an understanding of the "natural history" and hemodynamic consequence of a specific arrhythmia.

The net effect of a particular arrhythmia is determined by the circulatory state of the patient as well as the nature of the rhythm disturbance. Usually "benign" rhythm disturbances such as bigeminy, atrial fibrillation, etc., occurring in the patient with a limited cardiac reserve, may rapidly result in severe cardiac decompensation with myocardial ischemia, hypoxia, and hypotension, shock, or death. Furthermore, the arrhythmia may comprise the blood supply to the end organs, and thus produce myocardial infarction, renal failure, cerebrovascular accidents, hepatic necrosis, infarction of the intestinal tract, etc.

Since many arrhythmias are transient, and cause only minor alterations of the circulation, or occur in patients with less severely compromised circulations, the symptoms produced may be vague and nonspecific. Such symptoms include palpitations, episodes of weakness and fatigue; on the other hand, they may cause more serious symptoms and signs such as transient neurological deficits, lapses of memory, presyncope or syncope, increasing congestive heart failure, increasing angina, intermittent claudication, etc.

It must be remembered that the hemodynamic effects resulting from an arrhythmia are not due solely to the changes of cardiac function. The observed response of the circulation may well be due to peripheral effects. Thus, the status of the peripheral resistance, blood volume, baroreceptor activity, and venous return must be considered in any critical analysis of arrhythmic effects.

Rather than discussing the hemodynamics of particular arrhythmias, it is useful to consider the physiologic alterations that may be produced by any arrhythmia.

Rate

The rate of contraction of the ventricles will determine the cardiac output if the volume of blood ejected with each stroke remains unchanged. Thus, rapid or slow rates critically affect hemodynamics. Bradycardia may produce profound effects, especially when the stroke volume cannot increase and peripheral compensatory mechanisms are inadequate. In many patients, however, the heart may compensate physiologically during slow heart rates by increasing stroke volume due to increased ventricular filling and ventricular wall pressure (Starling's Law). The net effect of increased stroke volume may compensate for a decreased heart rate resulting in insignificant changes in cardiac output which can be adequately compensated for by an increase in peripheral resistance.

In addition, bradyarrhythmias may permit the discharge of "irritable" pacemaker foci, thus predisposing to tachyarrhythmias and producing bradycardia - tachycardia syndromes.

If the heart rate increases beyond a critical rate (varying with the basic status of the cardiovascular system) the ventricle fills incompletely during diastole, resulting in a decreased output per beat. A similar, but transient, effect occurs during rapid irregular rhythms or multiple premature contractions (the earlier the contraction, the smaller the subsequent output).

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*Prepared by the American Heart Association for this Journal.

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"Atrial Kick"

Although appreciated by Harvey (1628), the importance of coordinated contractions of the atria and ventricles and the contribution of atrial systole to ventricular filling have recently been reemphasized. In normal hearts, atrial contraction may add between 10-20% of ventricular volume, whereas in severe valvular heart disease, such as mitral stenosis, the diastolic ventricular volume may increase over 50% during the period of atrial systole. It has been demonstrated that with an effective well placed atrial contraction a higher ventricular end-diastolic volume may be obtained with a lower mean atrial pressure than occurs when the atria are not functioning properly. Insufficiency of the AV valves may also be produced by the loss of coordinated atrial and ventricular contractions, resulting in detrimental cardiovascular effects.

The hemodynamic effects of a rapid or slow heart beat may be minimal if the "atrial kick" is preserved, but when it is lost, the additional insult may cause decompensation.

Common examples of tachycardia associated with loss of coordinated atrial and ventricular contractions are atrial fibrillation, junctional (nodal) rhythm, and partial (second degree) heart block. The commonly used types of ventricular pacemakers should also be included, since atrial and ventricular contraction are not synchronized.

Method of Ventricular Activation

Several studies have shown that alteration of the normal sequence of activation of ventricular contraction results in adverse hemodynamic effects. Given two arrhythmias with identical coordination of atrial and ventricular contraction and the same heart rate, one demonstrating an abnormal sequence of ventricular activation (i.e., aberrant conduction) and the other normal sequence of activation, the former will result in greater alteration of hemodynamics. Such alterations, in addition to the absence of an effective atrial kick, explain why ventricular tachycardia or junctional tachycardia with aberrant conduction is less well tolerated than atrial tachycardia. It may also explain why patients with sinus bradycardia may deteriorate rather than improve when the *heart rate* is increased by fixed rate ventricular pacing (loss of atrial kick *and* normal ventricular activation).

Effects of Pharmacologic Agents

It should be mentioned that in the conversion of arrhythmias, especially tachycardias, to a normal sinus mechanism with drugs, the frequent myocardial depressant effect of these medications may result in a significant, although usually transient, fall in cardiac output. Thus, the administration of drugs such as lidocaine, quinidine, Procainamide (Pronestyl R), Diphenylhydantion sodium (Dilantin R), and propranolol hydrochloride for management of arrhythmias should be performed under careful monitoring; the smallest effective dose should be used with the expectation that the patient may experience a temporary decrease in cardiac output even after normal rhythm has been established.

Conclusion

The clinical manifestations of cardiac arrhythmias may produce unusual or ill-defined symptom complexes. The occurrence of incipient or increasing congestive heart failure, angina pectoris, intermittent claudication or episodic dizziness, fatigue, transient neurological disturbances or paroxysms of dyspnea should alert the physician to consider the possibility of a cardiac arrhythmia.

It can be concluded that the hemodynamic effects of arrhythmias depend upon the underlying status of the myocardium, blood vessels, and end organs, the heart rate, preservation of the "atrial kick," and normal sequence of activation of the ventricles. The altered hemodynamic effects may be further aggravated by the effects of pharmacologic agents used to correct the arrhythmia.

Changing Bronchomotor Tone In Malignant Carcinoid Syndrome

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THE typical malignant carcinoid syndrome[1, 2] occurs in association with malignant carcinoid of the small intestine and metastasis to the liver. The range of signs and symptoms[3] is determined by the location of the tumor, its size, and the biologically active chemicals it produces. Some of the symptoms associated with carcinoid tumor are related directly to the pharmacologic properties of the chemicals and hormones, serotonin, histamine, catecholamines, kinins, ACTH, and as more recently reported, insulin and prostaglandins.[4-6]

Recently, we studied a patient with a malignant carcinoid syndrome who presented with dyspnea as one of his main symptoms. We were able to demonstrate changing bronchomotor tone concomitantly with the flushing. Although bronchospasm is well recognized as one of the common symptoms of the malignant carcinoid syndrome, we have not seen a report documenting bronchospasm physiologically.

Report of Case

A 59-year-old man was examined at the Mayo Clinic on Feb. 26, 1970. He had a history of a 40-lb weight loss of 18 months' duration, increased redness to his face for 2 months' duration, and progressive exertional dyspnea of 6 weeks' duration. He denied actual wheezing, but he had noticed increased shortness of breath during flushing. He was well until August 1967, when he experienced diarrhea, with as many as 25 stools per day, preceded by mid-abdominal cramping. He had smoked one package of cigarettes per day for 30 years.

On physical examination, he was thin with a pronounced redness to his face and the upper anterior portion of his chest. He had early clubbing of fingers and toes. During the examination, he experienced periodic flushing, which was generalized over the face, trunk, and extremities. The lungs were clear and without wheezes. There was a grade 3/6 systolic murmur at the apex and a grade 2/6 systolic murmur over the pulmonic area. The liver was enlarged and contained a huge mass in the left lobe.

The hemoglobin level, leukocyte count, erythrocyte count, and urine were normal, as were the values for blood sugar, creatinine, calcium, and cholesterol. Chest and small bowel roentgenograms revealed no abnormalities. A liver scan showed enlargement of the right lobe and replacement of the left lobe by tumor. A celiac arteriogram revealed a highly vascular tumor, 18 by 20 cm, occupying both medial and lateral segments of the left hepatic lobe. The urinary excretion of 5-hydroxyindoleacetic acid was 14 times greater than normal, being 219.2 mg/24 hr.

Pulmonary function data obtained during minimal flushing are listed in Table 1. There was an increase in vital capacity (VC), total lung capacity (TLC), and functional residual capacity (FRC). Flow rates as quantified by the maximal breathing capacity and maximal midexpiratory flow were normal. Arterial oxygen saturation decreased slightly with exercise that was terminated because of fatigue and dyspnea. The steady-state diffusing capacity for carbon monoxide was slightly reduced, whereas inspirated gas distribution was judged normal on the basis of the N_2 washout index.

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During the course of the pulmonary function testing, flushing became more severe. In Table 2 are listed selected lung mechanics data when flushing was mild, as it became progressively severe, and immediately after treatment with a bronchodilator aerosol (isoproterenol). Notably, both resistance and lung volume increased. The product of R(rs) and Vtgv, which in our laboratory is normally 8 to 10, increased from 15.1 to 20.2 with flushing and then promptly decreased toward normal after bronchodilator therapy. VC and TLC showed little change during this period. At no time was wheezing noted, but the subject was aware of more labored breathing as flushing progressed.

On Mar. 6, 1970, a left hepatic total lobectomy was performed, with resection of the ileum; an ileoileostomy (end-to-end) and choledochostomy completed the procedure. The ileum contained multiple carcinoid tumors and the left hepatic lobe was replaced by an adenocarcinoma of grade 1 (carcinoma type).

Discussion

It is not within the scope of this report to discuss the syndrome described in association with gastric carcinoid in which are secreted large amounts of histamine and 5-hydroxytryptophan rather than serotonin. And it is also not within the scope of this report to discuss bronchial carcinoids.[9] Suffice it to say that the heart lesions in functioning bronchial carcinoids may involve predominantly the mitral and aortic valves rather than the tricuspid and pulmonic valves as in the classic syndrome.[10] Bronchial tumors are more likely to be associated with acromegaly and Cushing's syndrome.[11] Carcinoma of the lung[12] and pancreatic tumors[13] also can produce variants of the carcinoid syndrome.

Table 1

CONTROL PULMONARY FUNCTION DATA OF PATIENT WITH MALIGNANT CARCINOID SYNDROME

	Predicted	Observed
VC, liters*	4.1	4.9
TLC, liters	6.9	8.5
FRC, liters	3.5	5.4
Maximal breathing capacity, liters/min	99	138
Maximal midexpiratory flow, liters/sec	>1.7	2.6
Arterial O_2 saturation, %†		
Rest	95-98	95
After 1.8 min. of exercise‡	---	92
Carbon monoxide diffusing capacity,** ml/min/mm Hg	19	13
N_2 washout index, $\%N_2$	2.5 or less	0.7

*All volumes corrected to body temperature and pressure, saturated with water vapor (BTPS).

†Estimated by earpiece oximetry.

‡Step test, which ordinarily increases resting O-2 consumption threefold.

**Done at rest, sitting, by method of Bates and associates.(7)

Carcinoid tumors arise from enterochromaffin cells of the bronchus and gastrointestinal tract;[14] the enterochromaffin cells contain enteramine (5-hydroxytryptamine serotonin). It appears that the typical carcinoid found in a given tissue reflects the structural and histochemical features of the enterochromaffin cells in that tissue.[15] Bronchial and gastric carcinoid tumors are usually argyrophil; ileal and appendiceal carcinoid tumors are usually argentaffin.[15] Oates and associates[16] have shown that metastatic carcinoid tumors contain an enzyme that has the properties of kallikrein. The enzyme kallikrein is released by epinephrine, ethanol, and other flush-provoking stimuli to catalyze the formation of kinin. A clear relationship has been demonstrated between the flushing and release of kinins into the hepatic vein.[16] Increased levels of bradykinin-like activity are found in the blood of carcinoid patients as well as in the blood of patients during the flushing phase of the dumping syndrome.[17] Several vasoactive substances have been identified in the carcinoid syn-

Table 2

CHANGES IN LUNG MECHANICS DATA OF PATIENT WITH MALIGNANT CARCINOID SYNDROME

	Mild Flush (Control)	Progressive Flush	After Bronchodilator Treatment
R(rs), cm of H_2O/L/sec*	2.6	3.1	2.0
Thoracic gas volume, liters†	5.8	6.5	5.9
R(rs) x Vtgv	15.1	20.2	11.8

*Total respiratory resistance measured by oscillation technique.(8)

†Absolute lung volume (Vtgv) at which R(rs) measured.

drome.[18] Those tumors have a multihumoral potential which accounts for the variations of the syndrome from patient to patient, depending on the agent or combination of agents released. Serotonin is not the sole mediator of the paroxysms of vasodilatation nor is bradykinin the universal vasodilator in the syndrome.[19] Recently, a group of chemically related compounds — the prostaglandins — have been identified as potent vasodilators.[6] These could be responsible for some symptoms in carcinoid syndrome but not the bronchoconstriction as observed in our patient, because prostaglandin (PGE_2) has been found to be an active bronchodilator. In animals, prostaglandin (PGE_2) has prevented bronchoconstriction induced by histamine, serotonin, and bradykinin.[20]

The major gastrointestinal symptom is episodic watery diarrhea with associated abdominal cramping and borborygmi, similar to the gastrointestinal symptom of the patient presented herein. Usually, by the time he is first seen, the patient has liver metastasis; and hepatomegaly is a consistent finding. The primary tumor usually is in the terminal third of the small intestine and frequently cannot be visualized roentgenographically.

In addition to the flushing, bronchoconstriction has been ascribed to serotonin as well as to the kinins.[15] Our patient complained of progressive exertional dyspnea; and though he did not wheeze, he experienced progressively greater airway resistance with the flushing and a decrease in airway resistance after the administration of isoproterenol. We believe the pulmonary function data are most suggestive of changing bronchomotor tone probably due to kinin peptides. The patient was a cigarette smoker, but he had no dyspnea until the onset of symptoms from the carcinoid syndrome and pulmonary function (MBC and MMF) showed no obstruction when the control pulmonary function data were obtained (Table 1). The patient had a mild pulmonic valve obstruction, but we believe that the dyspnea was primarily due to the bronchoconstriction.

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Admission Policy of University of Nebraska College of Medicine

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Introduction

IN view of the increasing need for physicians in Nebraska as well as in other states, it was considered of interest to review for the readers of this Journal the admission policies and procedures of the University of Nebraska College of Medicine. It is the purpose, therefore, of this article (a) to familiarize physicians of the state with the College of Medicine admission policy, (b) to review the basic philosophy of admissions, and (c) to consider that the College of Medicine is only part of a continuum of education that ultimately is broadened and deepened by graduate medical education.

The Admissions Committee

The Committee on Admissions at the University of Nebraska College of Medicine consists of ten members, eight of whom are members of the College of Medicine faculty and are recommended by the Committee on Committees which is chaired by the Dean of the College of Medicine and finally approved by the College's Executive Faculty. In order to attain a desirable a balance as possible, it has been the policy that the faculty members chosen represent the basic science faculty, the clinical faculty who are usually full-time in their appointment, and at least two members of the volunteer faculty who are practicing physicians but active in their participation in activities of the College of Medicine. The Assistant Dean for Student Affairs serves actively as a member and Chairman of the Committee. The Registrar is an ex-officio member so that there can be continuity of information between records and information supplied for committee consideration. The student members are also appointed by the Dean of the College of Medicine in consultation with the Student Affairs Office after having received from each class names of students who are interested in actively working in this area. At present a sophomore and junior medical student are appointed with the sophomore carrying over for a second year. The Committee is responsible to and makes all recommendations to the Dean of the College of Medicine for his approval or disapproval.

Policies and Procedures

Admission to the University of Nebraska College of Medicine is granted without regard to race, color, religion, or sex.

In considering scholastic records of applicants, greater weight is given to the quality of work than to an excess of credit hours over the minimum required number. Consideration is also given to appraisals of character, personal interviews, scores on the Medical College Admission Test and general fitness and promise of the candidate.

A limited number of students from states other than Nebraska and foreign countries will be accepted for the freshman class. It is the policy of the Admissions Committee to require that foreign applicants spend at least one year and preferably two, studying in an undergraduate college in this country before applying for admission to the College of Medicine. This policy was established in order that the applicant may become familiar with the language, customs, and methods of teaching in the United States, so that the committee can obtain a better evaluation of his qualifications and preparation for medicine.

As far as specific application procedures, the University of Nebraska College of Medicine is a participant in the American Medical College Application Service (AMCAS) of the Association of American Medical Colleges. The application is processed by AMCAS and forwarded to this College of Medicine between March 1 and November 1 of each calendar year, usually the year prior to the desired date of admission.

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Upon receipt of the applicant's materials from AMCAS, the College of Medicine then requests in addition the following: (1) two recent unmounted photographs, (2) at least two character appraisals from professors of premedical sciences if possible, from advisors, from at least one person in the department of their undergraduate major if not a science, or the official report of a premedical or preprofessional advisory committee, if this is the procedure of the individual undergraduate college. More and more, undergraduate colleges have committees of this sort, and are often more informational and valuable than one or two professors, especially if it is a large school, and if the student is not too well known to the person from whom he requests a recommendation. Additional letters may be received from other persons of the applicant's choice who wish to write in his support. (3) All applicants must take the Medical College Admission Test which is offered in the spring and fall of each calendar year and they must complete the test no later than the fall of the year preceding intended entrance. (4) Supplementary transcripts of academic work completed subsequent to submission of the original transcripts to AMCAS are requested as they become available.

A personal interview with members of the Committee on Admissions is required of all prospective students. Interview sessions are held not only at the College of Medicine but also on the campus in Lincoln on specific dates in November and December. Arrangements for these are made through the premedical advisor at the applicant's undergraduate school. For interviews in Omaha, appointments are made through the office of the Registrar and Assistant Dean for Student Affairs.

In regard to the working methods of the Committee with the applicant's credentials it is important to note that all applicants have their entire applicant folder with its contents looked at and reviewed by each member of the Admissions Committee before he or she is offered a provisional acceptance. The Committee meets weekly after the deadline of November 1 considering the applicants as carefully as possible, meeting four to six hours at each setting so that the very large number of applicants receive careful and considered review. To enlarge upon the subject of "how the applicant is chosen" it can be stated that the Committee reviews the applicant's folder and credentials when each student is considered individually for choice. They try to look at the candidate from four major aspects, two of these being objective (grades and Medical College Admission Test scores) and two being more subjective (the recommendations submitted and results of interviews with members of the Admissions Committee or properly designated faculty and/or students). In the more subjective area assigned to the interview, often it merely acts as a confirmation of the recommendations sent by either premedical advisory committees or individuals. On the other hand, many times recommendations are relatively uninformative, and therefore the interview takes on much more importance in our overall look at the candidate as a prospective physician. At the time of the interview, the interviewers do not have the candidate's grade point average or Medical College Admission Test scores, but very honestly try to assess the candidate's motivations, maturity, and other personal attributes. There are many applicants who have average grades and MCAT scores who by recommendation and interview appear to be highly motivated and mature. Such evidence suggests successful performance in medical school, so that purely objective data are not the only criteria. Some candidates with very high grades and aptitude test may be entirely lacking in qualities that both the Admissions Committee and other interviewers feel important for a practicing physician and he may often be rejected for a person with less spectacular grades but with outstanding personal qualities and promise.

Specific Educational Recommendations

A minimum of 90 semester hours (three years of college work) in an accredited college is normally required. In very exceptional circumstances, 60 semester hours may be accepted. To provide an opportunity for scholarship in depth and maturation, the completion of a college major is strongly recommended. The completion of a Bachelor's Degree is desirable. In most instances, preparation for medical school we feel can best be achieved by including the following recommended courses:

Chemistry—

The recommendation is for two semesters of general or inorganic chemistry (analytical chemistry may serve as a part of this requirement) and a two-semester complete course in organic chemistry.

Biology—

Unless biology is chosen as the college major, additional electives in this field which may significantly duplicate courses given in medical school are less advantageous to the student than other electives, but we recommend at least 12 semester hours in the area of biology.

Physics—

It is recommended that this be a complete course in physics. Students should register for the course which is commensurate with their mathematical background if more than one is available.

English—

We recommend 12 semester hours which should include at least one year of composition.

Mathematics—

It is recommended that the background should include material through introductory calculus. Familiarity with statistics and the principles of computers although desirable, is not required.

Electives—

The student is urged to select courses from the general field of the humanities, social and behavioral sciences and not limit his training to the above scientific subjects.

No recommendation is made as to what the college major should be as long as the student also has the above minimum science background. Many of our students are majors in English, Sociology, Psychology, Political Science and other fields though perhaps the larger percent of applicants do have science majors but no particular preference is given because of a science major.

Augmentation Class

The Physicians Augmentation Program is funded by the Department of Health, Education and Welfare, and enables students to complete their medical education with the Degree of Doctor of Medicine in three years. The requirements for admission to this program are the same as those for the four year program; tuition is also the same.

The purpose of this program is to shorten the time necessary for graduation and to increase the supply of physicians. Since the program was only initiated in June 1970, we have had limited experience in judging its success. It would appear, however, from comments of students and faculty that it is a worthwhile program. It is intended that 30 students will be in our second augmentation program starting June 1971.

Selection of the Physicians Augmentation Program was made by writing the entire entering freshman class and asking them to signify their interest in participating in the three-year program. They were also asked "why" they wished to participate if they had responded "yes." Of those responding affirmatively, the Admissions Committee then picked the 20 students to start in June 1970.

This year, providing funds are available, the College of Medicine plans to pick an additional 10 students from the entering freshman class, and probably will keep the number at 30 for the ensuing five years under the present plan. The total number of students, regular section plus augmentation section, is 130 for 1971.

Practice in Rural Areas

At various times the suggestion has been offered that medical students be required by law to practice in a rural area after graduation. Although it is clear that a need exists in rural areas for more physicians, it would seem that the result desired will not occur by edict alone. The situation of being "ordered" to a certain area would be distasteful to the physician and would, at best, likely keep him in the area only until he has satisfied the legal requirements at which time he might leave the state altogether.

Furthermore, why single out the physician? Many communities need dentists and attorneys also. Should these professionals be required to stay in a rural area for a certain length of time? Since many schools are short of certified teachers, it follows that we should solve this problem by requiring our young teachers to stay in Nebraska upon completion of their education.

Legislation is not the answer to the physician shortage. The answer lies in convincing our young people that Nebraska is a desirable place to live. This must be done in each community by the residents themselves. This encouragement could take many forms but should be directed at individual students who potentially appear as a future physician. If the medical student knows that the people of his community are interested in his well-being both personally and financially, the chances are good that he will return to such a community to serve the people.

Scholarship and Financial Aids

After all the admissions procedures have been completed and the final selection has been made, the problem of financial aids assumes a very important place in the student's mind. Since July 1970, an office of Scholarships and Financial Aids has been established on the Medical College campus with a full-time administrator in charge. Students with financial problems are urged to contact this office as soon as possible after acceptance. A limited number of scholarships are available as well as loans and grants-in-aid supported by the Department of Health, Education and Welfare.

Discussion

In summary, the Admissions procedure is neither perfunctory nor simple and all members of the Committee are dedicated to the purpose of choosing the best possible prospects for medicine based on the many items and areas noted above. It would be a dream come true if each applicant selected would proceed to his ultimate goal that of receiving the degree of Doctor of Medicine. Certainly the committee bends every effort toward choosing those applicants, but health professions and medicine in particular is heavily applied for and sought after especially in the last decade. It is sad but only too true that after selecting the candidates who can be accommodated by the facilities of the school, there are many who cannot attain a place who are indeed also qualified. It is our hope that if they fail to obtain admission one year, they will, if their motivation is sincere and deep, apply again to give us an opportunity to allow them to study medicine or they may be possibly accepted by another school, the goal being to produce a physician. Naturally, we would like to be able to take all of the qualified people, but this is impossible. Recent statistics reveal that the average applicant to medical school last year applied for entrance in 1970 to approximately 6.2 schools. The figure for 1971 applicants will undoubtedly be higher according to our information so far. In 1965-1966, just five years ago, the University of Nebraska College of Medicine had a total of 321 applicants for entry in 1966. Currently we have over 1,000 applicants for 130 places and the committee works diligently in the face of these rather overwhelming numbers. Graduates of this College of Medicine through the years have achieved many high levels of success in various aspects of medicine and we are proud of the education offered them, and we find our graduates sought after and rarely have any difficulty obtaining excellent postgraduate (house officer) positions.

Admissions Program at Creighton University School of Medicine

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THE objective of an orderly admissions program at Creighton University School of Medicine is the same as for any medical school in the country; namely to constitute an entering class of the highest possible quality. This provides reasonable assurance that the class can successfully complete a demanding curriculum, and that, when they have done so, they will be good physicians with all the implications of the term.

However, as a private medical school, the process and problems associated with achieving that objective will vary in certain specifics from those of publicly-supported schools.

Some of these variations will be the result of sheer numbers. For example, the 1971 freshman medical class at Creighton will be selected from 4,731 applicants. While this has the advantage of offering a much larger pool of qualified applicants, the task of evaluating applicants becomes substantially more burdensome.

Also, as a private institution with a nation-wide constituency, Creighton's applicants come from every state in the Union. This makes it impossible to exploit fully certain desirable evaluation procedures such as personal interviews.

The first step in establishing the quality of the school's class selection procedure is the constitution of the Admissions Committee itself. At Creighton, an eight-man committee is responsible for reviewing the credentials of each applicant, and can call upon additional faculty consultants as needed. The members each represent different medical disciplines, and the committee is equally divided among the preclinical and clinical disciplines. The committee is chaired by an Associate Professor of Physiology and Pharmacology. In subsequent years, provision has been made to add representatives of the student body to the committee as full members.

The full committee meets for an average of 4 to 6 hours per week during the peak application period (October-February). The chairman devotes 10 to 15 additional hours per week checking applicants' files, noting deficiencies, and undertaking a preliminary screening of candidates.

During the current year, Creighton is one of 56 medical schools in the country participating in AMCAS (American Medical College Admissions Service). Under this program, sponsored by the Association of American Medical Colleges, an applicant for medical school files his credentials with AMCAS for a modest fee and the service will, in turn, provide those credentials to schools designated by the applicant. The applicant can submit his application to as many schools as he wishes on a sliding scale of costs. However, he is discouraged from applying to more than 7 or 8 as an unproductive practice. Basic records are maintained and distributed upon request by AMCAS, and verification of essential data is accomplished by the service.

Participating schools in the AMCAS program agree to accept applications only through the nation-wide service. Interested candidates who inquire directly to Creighton for application forms are referred to the AMCAS procedure, although annually hundreds of requests for information about the school are processed directly by the school's admissions service.

An initial application received at Creighton consists of a condensed four-page standard application form which includes the applicant's own declaration of undergraduate school performance, his MCAT (Medical College Admissions Test) scores, his personal and academic history, and personal comments concerning his motivation for a career in medicine or helpful interpretations of any questionable information on the form. Also included are two data processing cards and a supply of name, address, and individual code stickers. The punch cards are for return to AMCAS in the event an initial review indicates the school's interest in the candidate. One will provide transcripts from the applicant's undergraduate school or schools, and the other more complete biographical information.

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When the applicant is accepted as a candidate, a file is prepared and his application is logged. This log serves as a continuing check point on the status of an individual candidate's application.

At this time, the first direct contact with the applicant is initiated. This contact is a form letter requesting from the applicant a brief personal autobiography, a recent photograph, reference letters from instructors, character references, evidence of any familial relationship with Creighton, and a $15 application fee. The latter fee is necessary to support the extensive and expensive processing system.

As each separate item is received, it is entered in the log and the material added to the applicant's file. Frequently two months or more elapse before a complete file can be assembled.

When the file is complete, the application and supporting material are prepared for review by the Admissions Committee. This includes preparing a face sheet to which certain critical information regarding the applicant is transferred, and containing spaces for recording the action of the committee. At this point a case number is also assigned and entered on the applicant's file and in the log.

Committee review is the critical point for the applicant. After consideration and upon agreement by a majority of its members, the committee can reject the applicant, accept (with conditions), accept as an alternate, or hold the application pending receipt of more information. The latter action may be taken pending receipt of up-to-date transcripts relating to an academic program still in progress, when there is some question about the applicant having fulfilled all prerequisites for admission, or if the applicant indicates he has retaken or plans to retake his MCAT.

As would be expected, the committee's decision is based upon a blend of objective and subjective factors.

In the former category are the applicant's MCAT scores and pre-medical performance records. The Medical College Admission Test taken by all applicants for medical school throughout the country is designed to test an individual's knowledge and skills in four areas: verbal comprehension, quantitative ability, general information level, and scientific aptitude. Of these tests, quantitative ability and scientific understanding are accepted as among the most reliable indicators of an individual's ability to master the medical curriculum.

The applicant's performance during his premedical program is further evaluated in terms of performance in science courses and nonscience courses. The committee places considerable weight on the applicant's demonstrated ability to compete successfully with other students in the physical and biological sciences.

Subjectively, the committee looks for evidence that the student is strongly motivated toward a medical career. The pattern of grades earned in undergraduate school gives clues with respect to the applicant's maturation. Evaluations of instructors provide a picture of the applicant's industry and resourcefulness.

Together, all of these factors enable the committee to formulate a composite, although admittedly indistinct, image of the applicant and his chances for success in the medical education program.

Except in unusual circumstances, acceptances are always conditional. These conditions are satisfied when the applicant's grade transcripts confirm his undergraduate performance, and when the applicant successfully completes the academic program in progress at a level of performance consistent with his academic history. The large volume of applications and the geographic distribution of applicants make it impractical to interview each candidate prior to his evaluation by the committee. However, if the committee has any questions requiring clarification, an applicant may be asked to visit the medical campus for a personal interview.

Upon notification of his acceptance, the successful candidate can reserve a place in the class by submission of a $100 deposit to be applied against his tuition. This deposit is refundable prior to March 1 in the event the applicant chooses to attend another school.

A candidate may also be accepted for assignment to the alternate list. That is, the list of candidates from which replacements will be drawn in the event accepted applicants withdraw or otherwise disqualify themselves. A candidate selected for the alternate list is informed of his status as an alternate, the meaning of the term, and requested to notify the Admissions Committee whether or not he wishes to be so classified. Alternates are placed in rank order by the committee, and when vacancies occur the highest ranked are immediately notified of their entitlement to reserve a place in the class.

In all instances of acceptance or assignment to the alternate list, where the qualifications of candidates are similar, priority is assigned applicants from Nebraska or the surrounding states, students who have taken their undergraduate work at Creighton, and those with an alumni relationship to the University.

Rejection of an applicant is never undertaken lightly, since the very act of rejection has profound implications for the individual's career. The act is not made any easier by the impersonality of a procedure necessitated by sheer volume. This year the Admissions Committee at Creighton University Medical School will find it necessary to reject more than 4,000 applicants for its 1971 entering class, many of whom undoubtedly are well-qualified for the practice of medicine. The vast majority of these will receive this news by form letter.

Despite what may appear to be a highly organized selection system, the Admissions Committee and administration of Creighton University School of Medicine are not content with the process. Selection of qualified applicants is far from a pure science. Volume and the system itself make it difficult to consider subtle human differences that may be highly significant in the quality of the "product" emanating from the medical curriculum. In addition, students are selected on the basis of the likelihood that they can successfully meet the challenge of the existing curriculum. As medical education responds to the changing times, the standards against which future physicians are measured in the selection process may well have to change too.

Presidential Address

It has been a great honor and privilege to serve as your president in the first year of the decade of the seventies. This is a time when the delivery of health care is undergoing many changes. The critics of American medicine bemoan what they describe as exorbitant costs, lack of and inferior quality of medical care. Private medicine is under heavy political pressure. Politicians have discovered a "humanitarian" issue which promises votes in large numbers. As a result, many proposals for nationalized health care are being debated in Congress. It is no longer whether or not we should have a plan for compulsory care but what form the plan should take. The AMA has, therefore, introduced the "Medicredit Plan," which offers protection for catastrophic illnesses and "free" medical care to the poor, while charging others for universal health insurance according to their income level.

All of the plans to revolutionize American medicine proposed by labor, politicians, or private insurers share the assumptions:

(1) The "poor" will be cared for free, although there is a disagreement on the definition of "poor."

(2) Government and only government can pay for the medical care which is needed.

Parenthetically, at this point, the definition of "demand and need" might be debated. Greediness for what people consider their fair share of medical care is ruining the system.

In the decade of the sixties, private practicing physicians urged the government not to get involved in the delivery of medical care. The medical profession had cared for people whether they could pay or not, but what has happened with Medicare? Increased costs and over-utilization.

In 1971, the Professional Standards Review Organization has appeared on the scene. Again, private physicians believe that such a program will result in total control over the doctor's delivery of medical care with a consequent decline in quality and added administrative costs. It is difficult to meet the highest standards with a third party deciding not only the fees, but also when and if a patient should be admitted or dismissed from the hospital, much less deciding when he should or should not see the doctor at his office.

Physicians asked the government not to increase regulation of the drug industry fearing that new restrictions would inhibit drug discoveries and hinder care of patients. Sixty-five new drugs were introduced in 1959; less than ten new drugs were made available in 1969. Over 300 drugs or combinations of drugs have been removed from the market or declared ineffective. Today, it is difficult to write a prescription and know whether it can be filled by the pharmacist.

H.E.W. Secretary E. L. Richardson thinks that it is time for a change — " doctors have had little to say in formulating national health programs — we have to rely on them to continue the evolution of their social attitudes — we can't produce doctors on the basis of some form of involuntary servitude."

Therefore, it is paramount that not only the members present at this luncheon participate and co-ordinate the activities of the Nebraska Medical Association but that those members not present be informed and become active. Criticism by "splinter-groups" of organized medicine can only defeat the efforts of our Association.

It is 12:40 p.m., April 28, 1971, the hour is late for private medicine; I beg of each member present to contact an absent colleague, inform him of the urgency and need of his participation and support.

Thank you!

—C. R. Brott, M.D.

President's Page

June 20th will be the opening of the annual meeting of medicine's largest and most influential organization, The American Medical Association, in Atlantic City. Again there will be hundreds of scientific displays and presentations, there will be over a hundred commercial displays, and there will be 125 to 175 separate reports and/or resolutions acted upon. The twice yearly meetings of this organization result in the largest single impact on the lives of every practicing physician, both scientifically and socioeconomically. It is this socioeconomic factor I would like to stress this month.

Let me preface my remarks by taking note of the fact that almost all of America's practicing physicians have studied and practiced medicine as a result of altruism for his fellow man. As a group we are motivated, educated, and trained almost solely for the care of the sick or injured patient. However, because we deal with people of all ages: all social, ethnic, and economic classes: and all geographic areas, we also enjoy the unique opportunity to observe directly the effects of multiple socioeconomic factors on the total health of those we care for. All levels of government, local, state, and national have concerned themselves with both the delivery and financing of medical care. On a national basis, the 92nd and 93rd Congress of the United States will most likely propose, and possibly pass, the most sweeping changes in financing medical care this country has ever seen. This cannot fail to affect the practice patterns of every physician and therefore the care received by every patient.

We have already seen the introduction of the National Health Care Act (HR 4349), the National Health Insurance and Health Service Improvement Act (S 836), and the Physicians Manpower Support and Service Act (HR 4/70, S 935). Each of these is aimed at financing all, or some part, of the costs of treating the patient. Some of these bills also have the stated purpose of preventing illnesses (HMO'S), and some are aimed at "correcting the problem of maldistribution of physicians." All of these proposals however contain the underlying premise that all we need to improve the health of Americans is to spend more tax dollars. This premise is wrong since it ignores the effects of education, social standards, geography, demography, etc., each of which is at least as important as dollars and cents.

In an attempt to correct some of the problems associated with medical care in the U.S., the AMA has introduced its Medicredit Bill (The Fulton-Broyhill Bill HR 4960-61-62-63). This bill has already promoted over 125 cosponsors in Congress, and although containing some changes in traditional concepts, offers some hope of maintaining the elements of free enterprise while assisting financially on the basis of need.

The physicians of America can support progressive changes based on proven facts and reliable backgrounds, i.e., curriculum changes in medical education, improved public health programs, and catastrophic health insurance to name a few. We must support those proposals offering real merit as well as oppose those that will only result in increased bureaucracy.

Our time is short. We must make ourselves informed and involved, individually and collectively. It is imperative that medicine speak loudly and clearly on every point of every issue. We must do this through all of the multiple levels of organized medicine as well as our own political action group AMPAC!

—Roger D. Mason, M.D.

WashingtoNotes

Health insurance

The speaker of the American Medical Association's House of Delegates has warned against exaggerated claims that national health insurance is the total answer to the nation's health care problems.

Testifying before the Senate Finance Committee, Russell B. Roth, M.D., Erie, Pa., said the medical profession as represented by the AMA is "concerned by the overpromise which seems inherent in a wide variety of legislative proposals placing strong reliance on a restructuring" of the health care delivery system in this country.

"We commend to you our specific proposal, (Medicredit), for attacking financial barriers. We also solicit your support in ongoing efforts to augment manpower, to improve practice patterns, to apply effective measures to moderate and contain costs, to meet the challenges of the inner-city and the rural scene, and in general to meet the goal that no one shall be deprived of the best health care that is within our power to provide.

"One hears over and over the statistical studies to show reduced utilization rates under prepayment. But less prominence is given to other studies such as that by the Russell Sage Foundation which concluded that nearly half of all members of the Health Insurance Plan of Greater New York and also of the Labor-Health Institute go outside of the plan for some medical service. It is not our aim to downgrade prepaid practice. Many physicians, as well as many patients, like it. Under the Kaiser plan, only some 15% of beneficiaries who have opted into pre-payment coverage, opt out of it later on. But mark you, they do have an option."

Combination drugs

The American Medical Association urged that the Food and Drug Administration modify a proposed new policy on the continuation of marketing of combination drugs.

In testifying before the House Health Subcommittee, John R. Kernodle, M.D., Burglington, N.C., vice chairman of the AMA Board of Trustees, said:

"We recommend that all preparations judged by the Drug Efficacy Study as 'effective' and 'probably effective' should remain on the market; that all drugs judged 'ineffective' be removed from the market; and that the drugs categorized as 'possibly effective' be reviewed by clinically experienced consultants to the FDA, within a period of one year (instead of the allowed six-month period), to determine if further scientific evidence supports continued marketing."

"The drugs categorized as 'effective, but' have been resubmitted to the National Academy of Sciences — National Research Council panels and, accordingly, we recommend that no action should be taken with respect to this group until that review has been completed."

In a letter to the hearing clerk of the Department of Health, Education and Welfare, Ernest B. Howard, M.D., AMA executive vice president, said:

"The medical profession is concerned with the effect the proposed statement would have on medical practice. Many fixed drug combinations which have been used by substantial numbers of physicians without harmful or adverse reactions and with what qualified, expert clinicians judge to be beneficial effects will be placed in jeopardy. We do not believe that patients should be denied effective therapy which is safe, convenient, and economical."

Health manpower

The American Medical Association supported legislation that would extend the federal programs of assistance for training of physicians, nurses and other health manpower.

Walter A. Sodeman, chairman of the AMA's Council on Medical Education, told the Senate Health Subcommittee that the AMA supports the continued expansion in enrollment of medical school students because "the urgent need for more physicians persists."

Down Memory Lane

1. The physician is, from the very nature of his calling, a public character.

2. The difference between health and neurocirculatory asthenia, is one of degree.

3. Kill at once every fly you can find and burn its body.

4. The list as given for the United States accounts for 4,013 hospitals with a bed capacity of 311,159, and an average of 67% of these beds used daily.

5. Madame Marie Curie, of Paris, who discovered radium in 1898, is now in this country on a visit, the guest of leading American women, who will present to her one gram of radium worth $120,000.

6. The annual meeting of the American Medical Association occurs at Boston June 6 to 10. It is high time to pack your grip and consult your banker, for good things come high this year.

7. The Mary Lanning Memorial hospital, Hastings, graduated seven nurses, April 28th.

8. Nebraska has 69 hospitals, 44 having more than 25 beds, and 25 with less than 25 beds.

9. Granted then, that we have the proof of the relationship of focal infection to systemic disease, it remains only for us to apply definite principles in handling this type of patient.

10. In 100 cases in which backache was the prominent symptom only 11 showed pathology in the back region.

11. Also, we had our eyes opened to the very serious character of the war wounds. It was almost beyond belief to see how very extensive was the physical damage done. The infections were appalling.

Nebraska State Medical Journal
June, 1921

Surgical Significance of Splenic Abscess — J. R. Pickleman, E. Paloyan, and G. E. Block (Univ of Chicago, Pritzker School of Medicine, Chicago). Surgery 68:287-293 (Aug) 1970.

Splenic abscess is a uniformly fatal condition if untreated. Infection in the spleen results either from hematogenous spread of bacteria from a focus of infection, direct spread from intra-abdominal suppuration, or splenic trauma resulting in a splenic hematoma which becomes infected. The widespread use of antibiotics has led to numerous cases in which the symptoms of splenic abscess were masked until splenic rupture occurred. The main diagnostic tools are chest and abdominal roentgenograms, which can demonstrate an elevated left hemidiaphragm, basilar left lung pneumonitis, or a shift of the colon or stomach shadows. The present report deals with three cases and in addition documents a case correctly diagnosed with the use of ^{99m}Tc-technetium sulfur colloid scan. In the absence of multiple organ sepsis, the treatment must consist of immediate operation upon establishing the diagnosis, coupled with long-term antibiotic therapy.

Deafness Complicating Antibiotic Therapy of Hepatic Encephalopathy — D. P. Berk and T. Chalmers (Tufts Univ Med School, Boston 02109). Ann Intern Med 73:393-396 (Sept) 1970.

Five cases of ototoxicity associated with oral administration of neomycin are reported. The absence of renal failure but the presence of low serum antibiotic levels in these cases suggests that with prolonged exposure even minimal absorption can be toxic. Additional observations suggest that the related drug paromomycin may be similarly dangerous.

Our Medical Schools

New chairman at Creighton

A new chairman has been appointed to head a newly created department in the Creighton University School of Medicine. Dr. Myron P. Walzak, formerly with the University of Virginia Hospital, has been chosen to chair Creighton's Department of Urology, until now a division of the Department of Surgery.

Born in Cleveland, O., Dr. Walzak received both his undergraduate and medical degrees from Yale University, serving his internship at Ohio State University Hospital in Columbus. He was assistant resident in surgery at St. Alexis Hospital in Cleveland and at Grace-New Haven Community Hospital in New Haven, Conn.

After two years as a captain in the United States Army Medical Corps, Dr. Walzak was assistant professor and associate professor in the Department of Urology at the University of Virginia Hospital before coming to Creighton.

Rural community nursing

A pilot project in rural community nursing will be sponsored this summer by the University of Nebraska Medical Center School of Nursing and the community of Ogallala, Nebraska.

Four nursing students between their junior and senior years will spend the period from June 28 until July 23 in Ogallala gaining experience in the hospital, nursing home, doctors' offices, the center for the mentally retarded and other community-centered projects.

Miss Joyce Lowder, instructor in the School of Nursing, will accompany the students. Dr. Rena Boyle, dean of the School of Nursing, said the community will provide housing and that students will provide their own meals and other living expenses.

The objective of the project is to interest students in nursing careers in smaller communities. If the pilot project is successful, it will be incorporated into the curriculum of the School of Nursing and other Nebraska communities invited will be invited to participate.

The ERF

Creighton University's School of Medicine has received a check for $12,626.84 from the AMA Education and Research Foundation.

The Education and Research Fund is contributed by practicing physicians who earmark the money for the medical schools from which they graduated. Dr. Joseph Holthaus, dean of the Creighton Medical School, said, "Of the 102 medical schools receiving checks from this fund, Creighton ranked 26th in the amount contributed. This speaks well for the loyalty of our medical alumni."

During the past 11 years, physicians have contributed $142,151.46 to the Creighton School of Medicine through the AMA-ERF. During the same period, medical schools across the country have received over $12 million from the fund.

The money, presented to Creighton by the Nebraska State Medical Association, will go into the medical schools general operating fund.

Audiology at U of N

The division of audiology at the University of Nebraska Medical Center has received accreditation of its hearing services by the American Speech and Hearing Association.

The audiology services include hearing evaluations, consultation for selection of hearing aids, and assistance in the planning of rehabilitation programs for hard of hearing children and adults. The service was started in July, 1970.

The evaluation by the Professional Service Board of the American Boards of Examiners in Speech Pathology and Audiology included survey of the staff, equipment, organization, record-keeping and physical facilities, according to Dr. Thomas W. Norris, director of the division of audiology.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—
June 5 — Norfolk, Elks Lodge
June 12 — Ogallala, Elks Lodge
June 26 — Kearney, Elks Lodge
July 10 — Chadron, Elks Lodge
July 31 — Fairbury, Elks Lodge

SYMPOSIUM ON GENETIC COUNSELING presented by Childrens Memorial Hospital, June 16, 1971; sponsored by the National Foundation — March of Dimes; at the Sheraton Chicago Hotel, Chicago, from 8:30 a.m. to 5:00 p.m. Write to: The National Foundation — March of Dimes, 173 West Madison St., Chicago, Illinois 60602.

AMERICAN MEDICAL ASSOCIATION — Annual Convention, Atlantic City, New Jersey, June 20-24, 1971.

AMERICAN ASSOCIATION OF MEDICAL CLINICS — North Central Regional Meeting; July 17, 1971; Holiday Inn, La Crosse, Wisconsin. Write to Edward M. Wurzel, M.D., Executive Director, P. O. Box 949, 719 Prince Street, Alexandria, Virginia 22313.

31ST ANNUAL AMA CONGRESS ON OCCUPATIONAL HEALTH — Jackson Lake Lodge in Grand Teton National Park, Wyoming, August 29-30, 1971.

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY — Postgraduate Course, October 4 through 9, 1971 at the University of Illinois Hospital Eye and Ear Infirmary. Write to Department of Otolaryngology, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE — 22nd Annual Session; October 11-15, 1971; Americana Hotel, New York City. Address of AALAS is: 4 East Clinton St., P.O. Box 10, Joliet, Ill. 60434.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting, House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY — October 23 through 29, 1971; in U. of Illinois Eye and Ear Infirmary. Write to: Otolaryngology, P.O. Box 6998, Chicago, Illinois 60680.

OMAHA MID-WEST CLINICAL SOCIETY —39th Annual Postgraduate Assembly; November 1, 2 and 3, 1971; Omaha Hilton Hotel. The Society's address is 1040 Medical Arts Bldg., Omaha 68102.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City. NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28 - December 1, 1971.

Welcome New Members

John P. Reilly, M.D.
217½ North Pine
Grand Island, Nebraska 68801

Willard C. Brinegar, M.D.
Norfolk Regional Center
Norfolk, Nebraska 68701

Sreela Banerjee, M.D.
1605 South 77th Street
Lincoln, Nebraska 68520

Clarence Davis, Jr., M.D.
Osceola, Nebraska 68651

Harold W. Keenan, M.D.
Ogallala, Nebraska 69153

Roger K. Harned, M.D.
University of Nebraska
Medical Center
Department of Radiology
42nd and Dewey Avenue
Omaha, Nebraska 68105

It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precautions, and side effects.

The Journal assumes no responsibility for drugs and other products listed here.

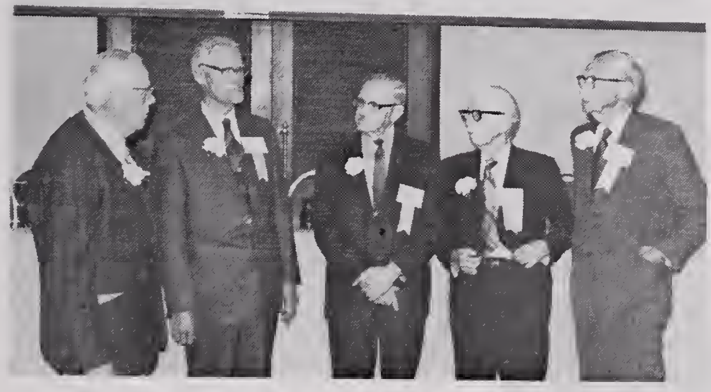
A medical student studies one of Teaching Dynamics' new pre-programmed cassette/slide medical lectures in school library using Teaching Dynamics' Model TD-201 Cassette/Slide Sound Projection System.

The series is designed for use by hospitals, medical, dental and nursing schools, doctors' groups and doctors in classroom lectures, medical presentations, medical education, patient care, patient training and post physician training. To date, nearly 24 different lectures have been prepared.

The programs are designed for use with Teaching Dynamics' Model TD-201 system. Schools, libraries, and hospitals which already are equipped with a Model TD-201 may order just the programs themselves.

For additional information, contact Teaching Dynamics, Division of Jetronic Industries, Inc., Main and Cotton Sts., Philadelphia, Penn. 19127.

Picture Gallery



Woman's Auxiliary

Auxiliary Report — House of Delegates, NSMA, April 28, 1971

As the official spokesman this year for the 860 Medical Auxiliary members throughout Nebraska, I welcome this opportunity to tell you about Auxiliary's projects and to thank you for your support and guidance.

Educational TV gave us the opportunity to promote two programs on health education. One was in the area of drugs and the other in sex education. They were both well received and served to join together school officials, auxiliary members and other health related agencies at the local level in a cooperative venture with positive results.

In an effort to improve relations between medicine and the state legislature, the Auxiliary invited all of the state senators and their wives to a special luncheon in their honor. We were pleased that 36 of the 49 Senators attended as well as 18 of the senators' wives. We had 48 Auxiliary members present so each senator was introduced by an Auxiliary member from his own district. Each County Auxiliary was then urged, as a followup of this contact, to join with its County Medical Society and invite its Senator and his wife to one of their joint meetings. We appreciated Dr. Brott and Dr. Mason as well as Dr. Kelley and Dr. Tanner taking the time to attend the luncheon. The response of the senators seemed to be a sincere appreciation of an opportunity to lessen the communication gap between our state legislators and our medical community. We all felt we learned a great deal. Your wives were charming ambassadors of good will for you.

In an effort to acquaint our high school students throughout the state with some of the more than 240 careers in the allied health field, a TOUR AND SEE DAY was held on April 12 at the University of Nebraska College of Medicine. 85 students and 15 auxiliary members and guidance counsellors from six outstate communities were shown through 10 departments of the Medical Center by members of the Nebraska chapter of WASAMA. This cooperative venture sponsored by the wives of the medical students and the wives of practicing physicians further strengthened our growing respect for each other. The students appreciated learning about other health related careers.

Your wives sold Christmas cards, toys, fruitcakes and watches and, added to your direct contributions, raised a new record amount of over $6,700 to be contributed to AMA-ERF.

Nebraska Medical Foundation, through Auxiliary projects, is the recipient of over $2000 this past year. This donation to NMF, to be used with matching funds of 12½ to 1, for student loans, has doubled each year for the past three years.

Environmental Health was a new committee formed this year. County Auxiliary activities included donation of trees for hospital grounds and parks, Environmental Health programs for lay groups and collection of bottles and cans for recycling projects.

During my 6,000 miles of travel and meeting with over 15 different organizations, I have enjoyed making many new acquaintances. Two special highlights of the year for me personally were (1) being one of 25 Auxiliary members from all over the country to attend the White House Conference on Children in Washington, D.C., December 13-18, and (2) having the opportunity to serve on both Governor Tiemann's and Governor Exon's Commission on Drugs. This gave me a chance to present positive viewpoints for medicine. The more friendly voices for medicine we have in these areas the less unfriendly resolutions will result.

Auxiliary members have been busy this year doing what they can to improve the public image of medicine in their many contacts with educators, legislators, political candidates, lawyers and other community groups. We have appreciated having representatives on the following Nebraska State Medical Association committees:

Health Education in Schools and Colleges

Public Relations
Medical Services
Medicine and Religion
Rural Health
Allied Professions
Nebraska MED PAC

Our members are also serving on the Board of Directors of Nebraska Inter-Agency Health Council and four of its sub-committees. Thirty of our members received Dozen Days pins. This represented at least 60 hours of Community Service by each recipient.

There is a close liaison between our state and national Auxiliaries. Special workshops, conferences, regional and national meetings were held and auxiliary officers have been active participants. This has served as a two-way street for spreading enthusiasm and ideas between county, state and national. Nebraska is represented at the national level in several important positions.

My very special thanks to Dr. Clarence Brott and Dr. Roger Mason for their guidance and unwavering support in making this a successful Auxiliary year. And as all of you well know, Ken Neff and Bill Schellpeper and their staffs are always available and helpful in guiding us through the administrative jungle of details. Without their wonderful cooperation, we in Auxiliary would not be able to accomplish so much.

The State Auxiliary has been fortunate in having excellent leadership in the past and I can assure you that we will be in very capable hands with Dorothy Olson and Barbara Carlson as President and President-elect.

Gentlemen, please remember your ever-loving and greatest fan club is your Auxiliary. Thank you.

Mrs. John Filkins,
President.

WOMAN'S AUXILIARY

Annual State Convention Board Meeting, April 26, 1971

REPORT: RESOLUTIONS AND REVISIONS COMMITTEE

WHEREAS, we consider it fitting and proper to express our thanks to all those who have contributed to the success of this convention and the accomplishments of our past year's work; therefore be it

RESOLVED, that we, the members of the Woman's Auxiliary to the Nebraska State Medical Association, extend our grateful thanks and appreciation to the officers and other members of the Executive Board of our organization, who have so ably carried on the business necessary for the proper functioning of the Auxiliary; and be it further

RESOLVED, that our thanks and appreciation go to the Woman's Auxiliary to the Douglas County Medical Society, hostess to this forty-sixth Annual meeting, for the welcome hospitality extended to all of us; be it further

RESOLVED, that we express particular gratitude to Mrs. Vernon Ward, Convention chairman, and to all of her committee chairmen for their work and thoughtfulness in planning for our convenience and entertainment; and be it further

RESOLVED, that the Nebraska State Medical Association be advised that we appreciate their leadership and assistance, that in particular Dr. Clarence Brott, President of the Nebraska State Medical Association; Dr. Roger Mason and the Advisory Committee, be informed of our gratefulness for their help and guidance throughout the year; and be it further

RESOLVED, that Dr. Frank Cole, Editor of the Nebraska State Medical Journal; Mrs. Colin Schack, Editor of the Newsletter; Mr. Kenneth Neff, Executive Secretary of the Nebraska State Medical Association; Mr. William Schellpeper, Assistant Executive Secretary, and Mary Churchill, Patsy Brown, and Judy Picard, Office Assistants, be advised of our sincere thanks for the efficient way they have handled our Auxiliary News, and for their ready assistance whenever we have asked for it, and be it further

RESOLVED, that the Blue Cross-Blue Shield organization know that we are grateful for their generosity in providing money for the project, Sons and Daughters, and for the drug booklets given to each Auxiliary, and be it further

RESOLVED, that the Nebraska Inter-Agency Health Planning Council, various members, and 18 agencies, know we are grateful for their support in promotion of the Sons and Daughters series, and for their financial help and the flyers sent in the mail, and be it further

RESOLVED, that we express our thanks to the Nebraska Clothing Co. for the style show, to the Omaha World-Herald, the Lincoln Star, the Lincoln Journal, the Kearney Hub, and to the Hilton Hotel, and be it further

RESOLVED, that we pledge our loyalty and devotion to the Woman's Auxiliary to the Nebraska State Medical Association; that we continue to be faithful in supporting its activities, promoting its projects and protecting its reputation and high ideals, and be it finally

RESOLVED, that these resolutions be published in the Nebraska State Medical Journal.

Respectfully submitted,
Margaret Farrell,
Chairman.

The Revisions committee will present the Revised Constitution and By-Laws to be voted upon at the Annual meeting. Mrs. George Robertson is chairman of that committee.

Respectfully submitted,
Margaret Farrell,
Chairman.

Medicinews

Nebraska ACS elects

The Annual Business Meeting of the Nebraska Chapter, American College of Surgeons was held Sunday, April 25, 1971 at the Omaha Hilton Hotel in Omaha, Nebraska.

After a Scientific and Business Meeting, installation of officers was held. Dr. John Filkins of Omaha was re-elected as President, Dr. Robert Gillespie of Lincoln was re-elected as President-elect, and Dr. Carl Sasse, Jr., of Omaha was re-elected as Secretary-Treasurer.

Dr. Ward cited

Dr. Peter A. Ward, an immunopathologist, has received the 15th annual Parke-Davis Award of the American society for Experimental Pathology.

The award, sponsored by Parke, Davis & Company, a subsidiary of Warner-Lambert Company, is given to a Society member under 40 "who has made the most outstanding contribution to the conquest of disease."

Dr. Ward was presented with the Award medal and a check for $1,000 by Dr. Peter Nowell, president of ASEP and himself a Parke-Davis Award winner in 1965.

Dr. Ward's lecture on "Leukotactic Factors in Health and Disease," which followed the presentation was one of the highlights of the ASEP'S annual meeting at the Palmer House in Chicago.

Dr. Ward is being honored for his work in the control of leukocyte migration, specifically for demonstrating that the factors which exert such controls can under certain conditions result in adverse or beneficial inflammatory reactions. His findings shed new light on the nature of inflammatory diseases such as rheumatoid arthritis.

MDs receive awards

More than 20,000 MDs have received the Physician's Recognition Award, established by the American Medical Association in 1969 to honor doctors' participation in continuing medical education.

The Physician's Recognition Award credits the MD for his "life-style." It's given for a minimum of 150 credit hours earned over a continuous three-year qualifying period. At least 60 hours are required, credits of formal education courses, teaching or publications; the remaining are elective, such as participation in scientific meetings and other self-directed study.

Short-acting diuretics may create abrupt,
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In edema and hypertension.

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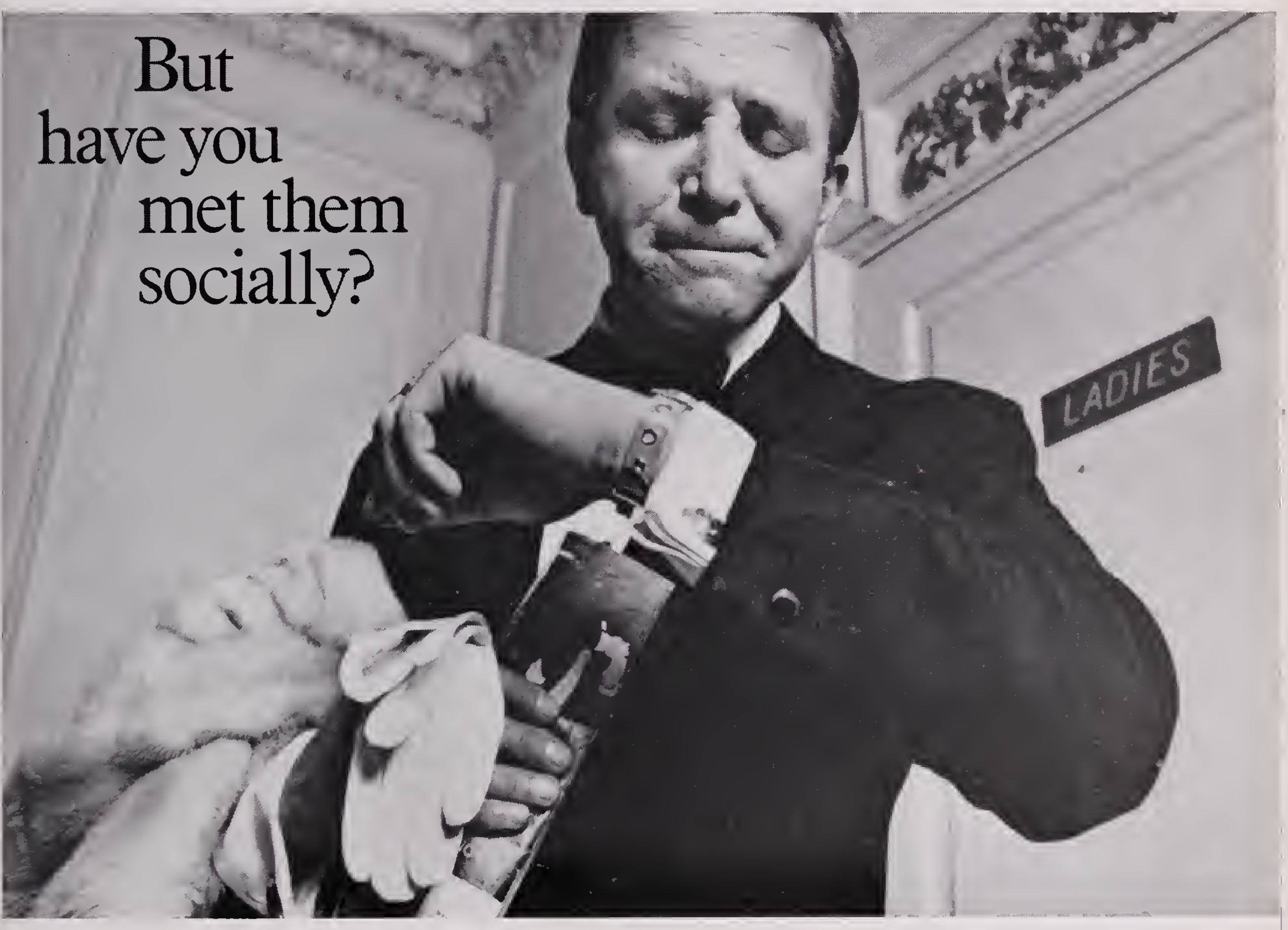

But
have you
met them
socially?

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

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Medicinews . . .

Practical nurses

Practical nursing schools in the United States reported 53,080 students enrolled in October 1970, an increase of 4,738 over the previous year, according to a survey released by the National League for Nursing, New York.

The number of programs preparing practical nurses remained stable, with 1,253 in 1970 as compared with 1,252 in 1969, the survey revealed.

The higher enrollment figure thus reflects expansion in class size, indicating a growing interest in practical nursing as a career, Mrs. Margaret E. Walsh, NLN general director, stated. She pointed out that there has been a steady increase in the number of students preparing to become licensed practical nurses during the past decade.

Student admissions to practical nursing programs rose to 55,635 in the academic year 1969-70, or 6,528 more than the year before, the League indicated. During the same period, 37,128 men and women were graduated from practical nursing schools — 2,264 more than for the preceding twelve months.

"I think, Ed, we'll take you in for a tune-up."

Medicinews . . .

Rh babies who die

Because about 70,000 American women a year who become mothers fail to get a protective vaccine that they need, they are doomed to bear some 4,000 babies sick with Rh disease, approximately 700 of which will eventually die of the blood disorder — a tragic loss that is unnecessary.

The preventative for Rh hemolytic disease of the newborn, available almost three years, was described recently as "specific and powerful" by Dr. John G. Gorman of Columbia-Presbyterian Medical Center in New York. He said that the amount of vaccine —RhoGAM$^{\text{TM}}$ Rh$_0$ (D) Immune Globulin (Human) — used in 1970 will save the lives of more than 2,000 babies in the United States alone.

AAMC annual meeting program announced

Prepaid medical care, health maintenance organizations, financing of health services, and training and use of allied health personnel will be the featured topics at the 22nd Annual Meeting of the American Association of Medical Clinics (P. O. Box 949, 719 Prince St., Alexandria, Virginia 22313), to be held September 14-18, 1971 at the Sheraton-Cleveland Hotel, Cleveland, Ohio.

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Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the Journal's address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.

The Law . . .

Hearings on government reorganization

The Senate Government Operations Committee held hearings on S. 1430, S. 1431, S. 1432 and S. 1433, the President's proposals to reorganize the federal government. These bills would restructure the executive branch by merging the Departments of Agriculture, Interior, Commerce, Transportation, Labor, HUD and HEW into four new departments, namely, the Departments of Community Development, Natural Resources and Economic Affairs.

Testimony was presented by George P. Schultz, Director of the Office of Management and Budget, and Roy L. Ash, who served as Chairman of the President's Advisory Council on Executive Reorganization which drew up the proposed structure for the legislation. The thrust of both statements was that the new consolidations would provide greater efficiency and coordination. Further hearings will be scheduled for views of other interested parties.

The Nebraska State Medical Journal
Bill O'Malley

"A TV survey? No, I'm not watching my favorite program. But I am reading my favorite publication."

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Call it actinic, solar or senile keratoses, many regard it as "precancerous."[1,2]

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,[3,4] offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these mutliple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.[5] Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.[6]

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.[5] The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.[6]

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis*, *6*:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, *97*:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer*, *25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

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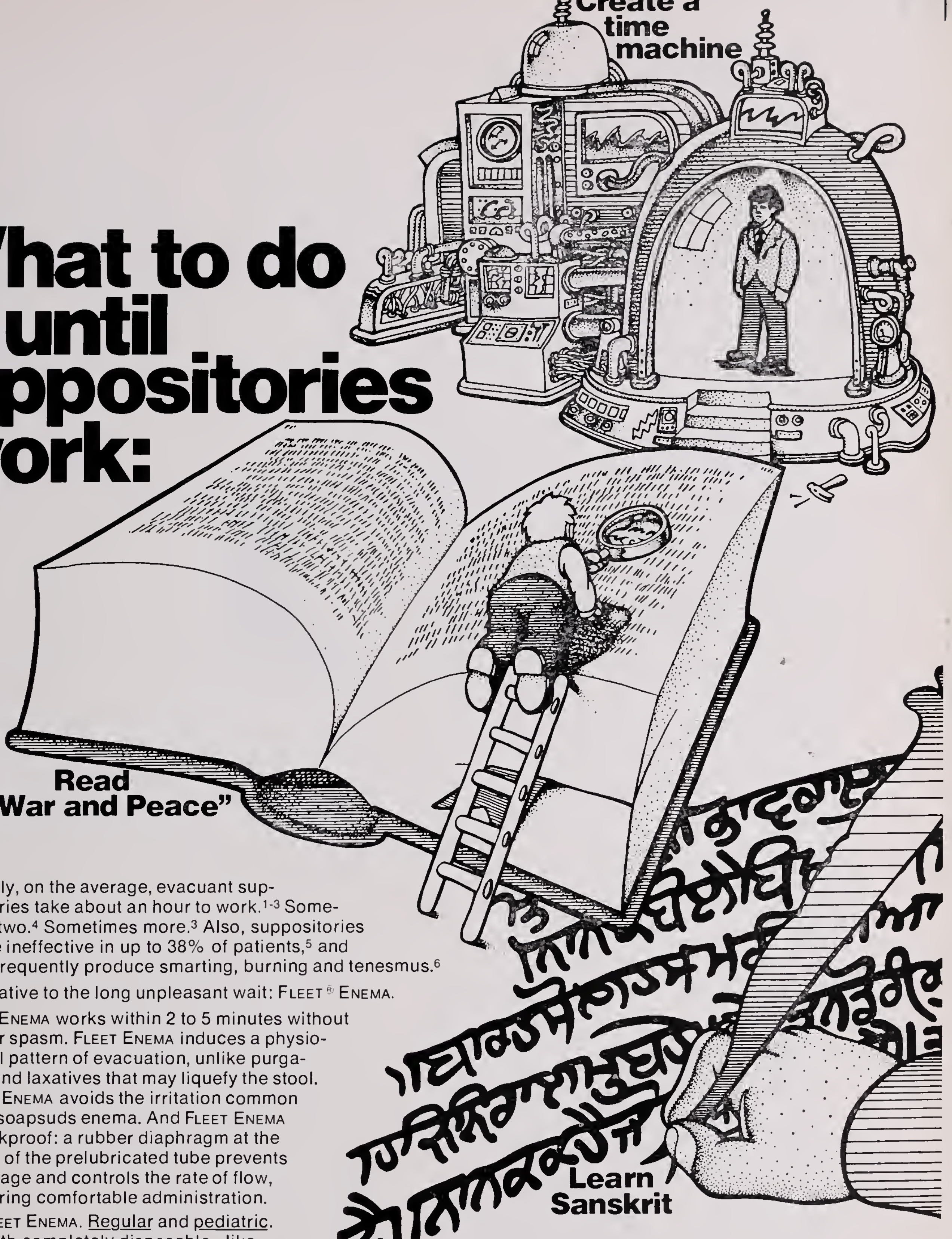

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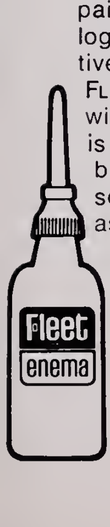

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References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.

"I think we forgot to add the sugar."

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THE NEBRASKA STATE MEDICAL JOURNAL

THE ASSISTANT

The medical assistant we knew used to receive patients, answer the telephone, schedule appointments, and type all sorts of things. Another MA took care of patients in the hospital; we were the congress and decided what was to be done, she was the policeman on the beat and saw that it was done. And we called the first a secretary or aide or receptionist; and the second was our friend the nurse.

But the aide does histories now and the nurse takes blood pressures and starts intravenous therapy. And nurses are being trained to do physical examinations, and they are supposed to do them as well as doctors.

Now we have the new MA or the PA, the Physician's Assistant, the almost-MD, or the not quite physician, the possible answer to the manpower shortage problem. He, if the women's liberation leaders, who do not impress me with their femininity, will go along with the pronoun, will make decisions and treat patients. We may some of us be mildly for this sort of thing, but it is more than likely that we are gently being led down the primrose path and will finally learn why there are homes for unwed mothers.

To begin at the beginning, the doctor finds that there is too much for him to do, and much of it can be done by nondoctors, like answering the telephone or letting it ring, and waking patients and giving them sleeping pills. The nondoctor maintains that there are not enough physicians and again, that some kind of almost doctors can do all sorts of medical things. Are there not midwives who, being neither fish nor fowl, do what physicians, or physician-specialists, do?

We are all, doctors or not, opportunists, and we cannot think without rationalizing. So we let nurses do things they could not do 20 years ago, and midwives deliver babies and even intubate. And now the PA will repair lacerations and perhaps reduce dislocations and fractures.

I do not like it, but then I didn't like the scrapping of the Model T. We have been told that there is a need, which may be so, and that what is expedient is good, which may not. I remind those who point to Russia that they have had half-doctors there for years, and that medical practice here is better than theirs. I well remember a medical article in one of our leading nonmedical magazines that said the Russians were using intravenous alcohol for anesthesia, and why weren't we? I got the original article (in English) and read the whole thing, between the lines and all. We invented anesthesia and we had used IV alcohol long ago. The Russians had run out of proper anesthetic agents; they were used to operating without anesthesia anyway, and I have read much to support this, and they had all kinds of complications. Veins were inflamed and obstructed, and patients thrashed about, and there was blood in the urine. But the condensation in the little magazine said we had much to learn from the Russians. Journalism perhaps, certainly not medicine.

Maybe, if a doctor is not available, it is good to have a midwife. In America, we have the nurse-anesthetist, but England and Canada did not when I last inquired. Now nurses even read x-rays. But I should not care to be sewed up by a nondoctor, and I remind those who would bring this about that sewing up in this country has always been done by doctors, so the need for suturing by nonphysicians does not exist.

And finally, I could not sleep well if a nondoctor, acting as my agent, repaired a lacerated hand or reduced a fracture. Did he miss an injured nerve or tendon, or an artery, and did he get the bone ends together, and is the cast too tight? What I mean is, shall a nondoctor practice medicine?

I agree, progress is good, but change is not always progress, and perhaps going far is not always justified. For everywhere in life, in civil disobedience, in pornography, in capital punishment, in art, and in medicine, it is always well, and sometimes necessary, to draw a line.

—F.C.

THE TONSILS, THE FORESKIN, AND LOGIC

Adenotonsillectomy is a particularly common procedure, constituting some ten percent of all surgery done in this country. Of about 13 million operations performed here annually, there are at least a million tonsillectomies, or two million American tonsils come out every year. But letters-to-the-editor often wonder why and ask what are the indications for T&A. They strongly suggest that T&A ought not to be done as commonly as it is today. Tonsils and adenoids have been taken out because they were large or met and kissed, or were purulent, or were once associated with infection in another part of the body, or because it was thought that they interfered with hearing, or because, like Mount Everest, they were there.

Circumcision has been practiced as long as we can look back and, like T&A, very commonly. This procedure is done without waiting for disease to raise its head. It is assumed that the prepuce is needless, which may be true, that it has a negative value, and that all men are better off without it. The procedure is said to have religious justification, to promote cleanliness, and even to prevent cancer.

It seems to me that after all these years, we would know whether we ought to remove tonsils and foreskins as frequently as we do now or if we should stop. The controversy still goes on, and it is time it was settled.

But I have noticed one thing about the letter writers. Those who condemn tonsillectomy are not tonsillectomists.

—F.C.

THE LICENSE

If you want to move to another state, you may find that you cannot practice there, because your license will not be recognized, even though it is perfectly good where you are. We have to remember that we are a union of states, which is how we got our name, and that states have states' rights.

But medicine is the same throughout the country. To make things worse, recognition of one state's license by another is "reciprocity," because one state says to another, "If you recognize me, I'll recognize you." So a state that gives easy examinations and passes everybody will recognize licenses issued by a large number of other states, and the other states will "reciprocate" and recognize the license awarded after an easy examination. And states with hard examinations will recognize few other states, so the thing to do is to go to an easy state for the examination and then ask for reciprocity where you really want to practice.

We are some of us leaners-to-the-right and for weak central government, and want very much to control our own affairs at local levels. But we need country-wide reciprocity too, which may mean federal examining and licensing. And we cannot have both.

But we *might* have national examining by a physician-created and physician-constituted organization. Like the AMA.

—F.C.

ALAS HOW THE YEARS GO

Fame fleets, and classical descriptions too often go unread. Scientific discoveries, like the unearthings of archeologists, stand atop one another, and the first is quickly buried and forgotten. It is like trying to hold mercury in your hand; we used to call it quicksilver, but we used to say Basedow's disease, too.

Anyway, while eponyms linger, original articles do not, and I wonder why. In my favorite medical book, Raynaud is not given as a reference for Raynaud's disease. Carrion, Brill, and Hansen are similarly missing from their own bibliographies, and so are Wilson, Behcet, and even Hodgkin. Parkinson is unfortunately not referred to in the discussion of his disease, nor is Chagas, and neither is Gaucher.

Fabry and Paget are mistreated in the same way, and there are others. Why don't we read Hansen on Hansen's disease, Hodgkin on Hodgkin's disease, and Parkinson on paralysis agitans? We should.

Perhaps later workers have written recently and well, but discouraging the student from reading the original article is something that needs defending. An original article should be forever preserved; there is nothing like it.

And poor Munchhausen is not a reference in the discussion of the Munchhausen syndrome.

—F.C.

Levitation in Treatment of Large - Area Burns — R. Sanders, J. T. Scales, (Royal National Orthopedic Hosp, Stanmore, Middlesex, England) and I. F. K. Muir. Lancet 2:677 (Oct 3) 1970.

The treatment of seven patients with severe burns by levitation on a hoverbed, using humidified, warm, and sterile air is described. Burns of any extent, distribution, or thickness may be simultaneously and completely dried at a greater rate than by any other available method. Nursing is simplified and fewer nurses are required in the acute phase of treatment. Burn wounds did not become clinically infected until separation of the eschar and then healed quickly with excellent survival of the grafts. Follow-up showed scarring to be normal, pain was relieved, there was no vomiting, and sleep was normal. Free movement and careful positioning of the patient is possible without lifting and treatment of pressure areas is made unnecessary. Body temperature can be controlled. The burn is exposed to air but not to view. The levitation equipment has been proved safe, and noise is reduced to acceptable levels. The "microclimate" permits conditions which are ideal for patients and attendants.

Management of Carcinoid Tumors — R. G. Martin (6723 Bertner Ave, Houston 77025). Cancer 26:547-551 (Sept) 1970.

A series of 59 carcinoid tumors is presented. Histologically, carcinoid tumors cannot be differentiated as being benign or malignant. They are slow-growing and surgical excision is the preferred treatment. Local excision for lesions under 2 cm and more radical excision along with the regional lymph nodes for larger lesions are indicated. Twenty-five percent of the lesions in this study developed in patients having other primary cancers. Tumors may be multiple, as often is the case in ileal lesions. A certain number of patients develop the carcinoid syndrome with all or many of its characteristic symptoms. Chemotherapy and x-ray therapy have limited use in the management of these patients. Antiserotonin drugs and cortisone may be beneficial in the therapy of carcinoid syndrome. In this study all patients with the syndrome died, but three patients died from the disease without having the syndrome. All other deaths were attributed to causes not related to the carcinoid lesions, often from coexisting malignancies.

Serum Insulin or Plasma Insulin? — J. R. Henderson (Guy's Hosp Medical School, London). Lancet 2:545 - 547 (Sept 12) 1970.

The concentration of insulin was measured by double-antibody immunoassay simultaneously in the plasma and serum of 38 fasting and non-fasting individuals. The concentration found in heparinized plasma was consistently higher than that found in serum, and experiments suggest that the high plasma level is an effect of heparin. Evidence from previous workers (who have measured the hormone's concentration in plasma and serum separately) would seem to support this. Insulin should always be assayed in the patient's serum.

Steroid-Induced Mediastinal Lipomatosis — C. D. Teates (Univ of Virginia School of Medicine, Charlottesville 22903). Radiology 96:501-502 (Sept) 1970.

A case of mediastinal lipomatosis induced by steroids is presented. The severity of the mediastinal lipomatosis appears to reflect the severity of truncal obesity. When feasible, this feature may be used as a diagnostic test to prevent possible confusion of the entity with other conditions of serious consequence.

Pulmonary Blastomycosis

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and
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THE incidence of pulmonary blastomycosis in Nebraska is extremely rare, and the latest study by Furcolow and his associates reports only 3 cases in Nebraska during the period from 1885 to 1968.[7, 10] Our own casual survey of the incidence of blastomycosis during the last ten years among major hospitals in Omaha area reveals only one proven case at the St. Joseph's Hospital. Recently, we had a case of pulmonary blastomycosis in a 17 year old male. We report this case because the patient's symptoms were typical of pulmonary fungal infection and his responses to antifungal therapy were gratifying. This report also contains a critical review of the literature on blastomycosis.

Case **Report**

A 17 year old Negro male was admitted on December 15, 1969 to the Immanuel Medical Center with chest pain, spiking fever, and hemoptysis of five days duration. Approximately three weeks prior to the onset of symptoms, the patient had sustained small lacerations in his left finger and over the right eyebrow during his work in a meat packing company. At that time, the lacerations were treated by a local physician, but the wounds did not heal, necessitating drainage. These wounds subsequently healed, however, and at the time of admission to the hospital there was no discharge from the site of lacerations.

The patient had chickenpox, measles, and mumps in childhood. Except for a "pneumonia" about five years ago, he had no known respiratory problem and has been in good health all of his life. No history of pulmonary tuberculosis, bronchial asthma, allergy, hypertension, diabetes mellitus, or anemia. No history of surgery. Family history is essentially negative, except that the patient's grandfather had diabetes mellitus and patient's mother had bronchial asthma. He has three brothers and five sisters, none of them having had respiratory problems. The patient lived in the south in his childhood, but has never been in the southwest. He is married and has one child. He worked in a meat packing company for five months before he became ill.

Physical examination of the patient revealed a well developed and well nourished young Negro male (height: 6′ 2″; weight: 183 lbs) in a moderate amount of distress with fever, cough, and hemoptysis. Body temperature was 101°F, pulse 80/min, regular; blood pressure 120/70 mm Hg. Breathing was not labored, and the patient was not cyanotic. The examination of the head, eyes, nose, and throat showed a healed scar over the right eyebrow and slightly injected pharynx. Otherwise, the ears were clear and the funduscopic examination was normal. The trachea was in the midline, and there was no cervical lymphadenopathy. Auscultation of the lungs revealed decreased breath sounds over the left posterior lung field with a friction rub present in the posterior axillary line. The heart was normal and there was no murmur. The abdomen showed no organomegaly or tenderness. The genitalia, rectum, and extremities were normal, except for a healed scar in the left small finger.

The admission chest x-ray films showed an area of consolidation in the apical segment of the left lower lobe. There was a patchy infiltration extending into inferior segments (Figure 1). The diaphragm, pleura, heart, and right lung were normal. Laminogram of the left lower lobe revealed a dense infiltration of the apical segment and the cuts at 6 through 8 cm showed a round density (Figure 2). Other relevant laboratory data on admission were RBC 4.60 million/mm^3, WBC 13,200/mm^3, Hb 12.2 gm%, and Hct 38%. Urinalysis showed rare RBC and WBC under high power field, but no casts, epithelial cells, or bacteria were found. Sputum cultures revealed a normal flora. A skin test for PPD-S (48 hrs.) was negative, and repeated sputum stains and cultures revealed no acid-fast bacilli. The patient was then placed on a succession of antibiotics including Tetracycline, Penicillin, Lincomycin, Ampicillin, Cephaloridine, Chloramphenicol, and Nystatin. He failed to show any subjective or objective response to the above antibiotics. On the 19th hospital day (January 2, 1970), all of the antibiotics were discontinued. Blood and urine cultures were taken daily. Complement fixation tests for coccidioidomycosis and histoplasmosis, agglutinin test for brucellosis, and cold agglutinin test were all negative. Cultures of bone marrow biopsy material and the cerebrospinal fluid yielded no growth.

Since the symptoms did not respond to any of the antibiotics administered, and

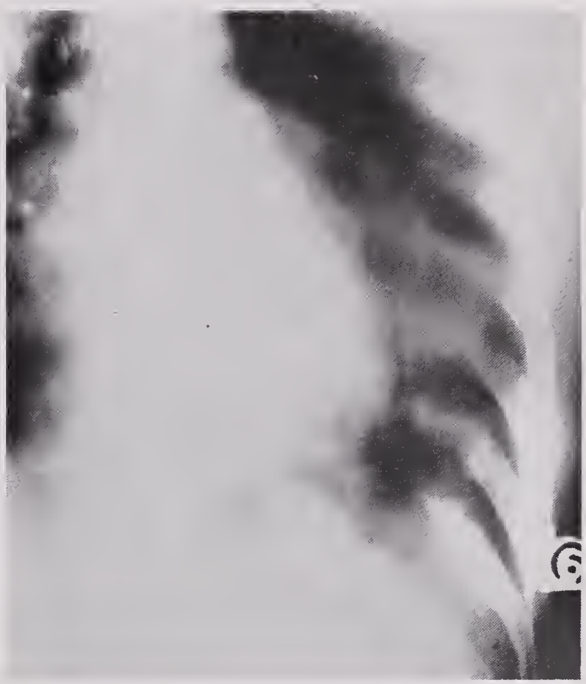

Figure 2. Laminogram of the left lower lobe (December 22, 1969).

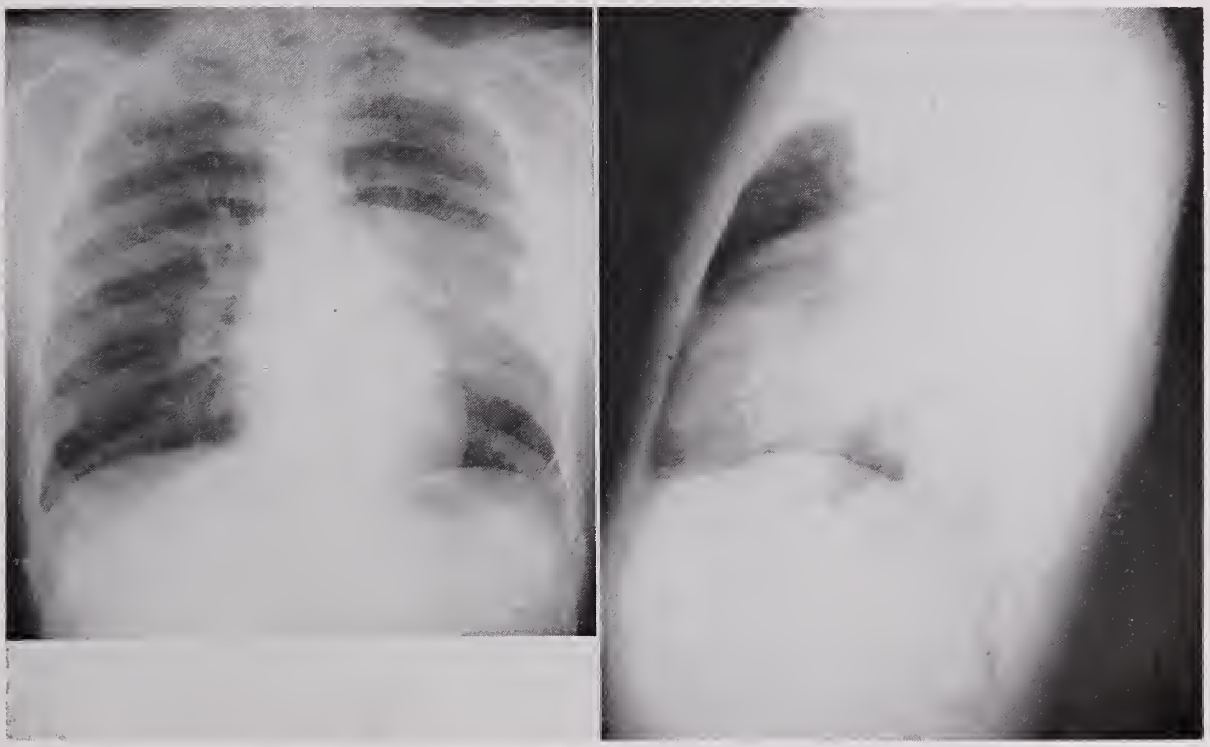

Figure 1. Chest x-ray films (PA and lateral) on admission (December 17, 1969).

in spite of the fact that no positive agent had been identified, the patient was placed on Amphotericin B on the 24th hospital day (January 7, 1970). It was administered intravenously, beginning on the first day with 1 mgm in 250 ml of 5% dextrose in water. To this IV fluid were added 50 mgm of heparin and 25 mgm of hydrocortisone succinate. The latter agents were added to each IV fluid containing Amphotericin B given throughout the course of therapy. Amphotericin B was increased at 5 mgm increment daily for 5 days and then 10 mgm increment daily until a maximum dose of 70 mgm was reached. Maintaining this dosage, the Amphotericin B was given at a second or third day interval until the 44th hospital day (January 27, 1970). The control value of BUN before Amphotericin B therapy was 9 mgm%, and it rose rapidly to 27 mgm% by the 9th day of therapy. Thereafter, the BUN ranged from 40 to 70 mgm%. It was further necessary to reduce the dosage of Amphotericin B to 50 mgm because of a marked azotemia, and it was given every second or third day until the 55th hospital day (February 18, 1970), when a total dosage of 1 gm of Amphotericin B was administered. The level of BUN and the dosage of Amphotericin B are shown in Figure 3.

With the initiation of Amphotericin B therapy, the patient began to show rather rapid improvement: he began to feel better on the 2nd day of treatment and the temperature returned to normal by the 5th day. The chest x-ray film showed a significant improvement by the 6th day; and above all, the sputum cultures (taken on January 5, 1970) finally grew out blastomyces species on February 13, 1970. Isolation and identification were accomplished using Sabouraud's media at room temperature and brain-heart infusion blood glucose agar at 37°C. At room temperature, on Sabouraud's media, an aerial, white-tan mold developed, which microscopically demonstrated smooth-walled conidia borne at the tips of lateral conidio-

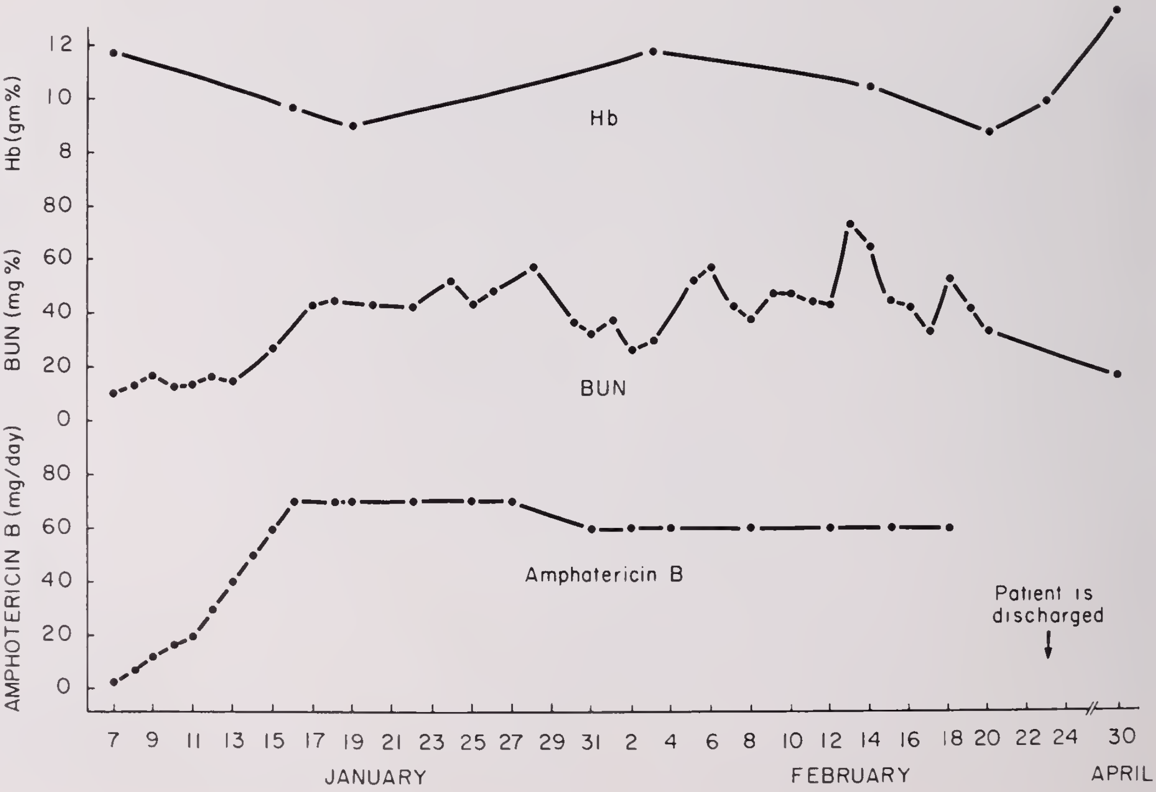

Figure 3. BUN and hemoglobin level during Amphotericin B treatment.

phores or on the sides of the hyphae. At 37°C, a yeast phase was demonstrated which, microscopically, was composed of round to oval, single budding cells with the bud attached to the parent cell by a broad base.

The rest of the hospital course was uneventful except for occasional irritations at the site of IV infusion, mild hypokalemia, and gradually developing anemia. BUN determination was done almost daily along with the examination of serum electrolytes and CBC. During the Amphotericin B therapy, the serum potassium fell to 3.8 mg%, which necessitated supplementary treatments with potassium gluconate. Also noted was a gradual development of anemia (normocytic and normochromic) as shown by a fall of the hemoglobin from the pretherapy level of 11.8 gm% to 8.9 gm% by the 68th hospital day (February 20, 1970). The change in the hemoglobin during Amphotericin B treatment is also shown in Figure 3.

The lung function test performed on February 3, 1970 revealed a considerable restrictive impairment as reflected in the vital capacity of 70% (3.66 L) of the predicted normal. However, there was no indication of airway obstruction ($FEV_{1.0}$ 87%) and the arterial blood gases were all normal (SO_2 96%, PCO_2 34.1 mm Hg, pH 7.507). A repeated measurement of the vital capacity in September 1970 showed a normal value of 99% (4.46 L).

It took 42 days to complete a total dose of 1 gm of Amphotericin B, and the patient was discharged on the 71st hospital day (February 23, 1970). By that time, all the symptoms had subsided and the chest x-ray film just prior to discharge showed a marked clearing of the infiltrate. After discharge, a follow-up study showed the return of the hemoglobin to 12.2 gm% and the BUN to 9 gm%, and an almost normal chest x-ray film (Figure 4). The patient has now returned to his daily work and has no sign of recurrence.

Comments

Blastomycosis is a fungous disease which was first described by Gilchrist in 1896.[1] It is caused by *Blastomyces dermatitidis* which is dimorphic, occurring only as a unicellular, budding, yeast-like form at 37°C

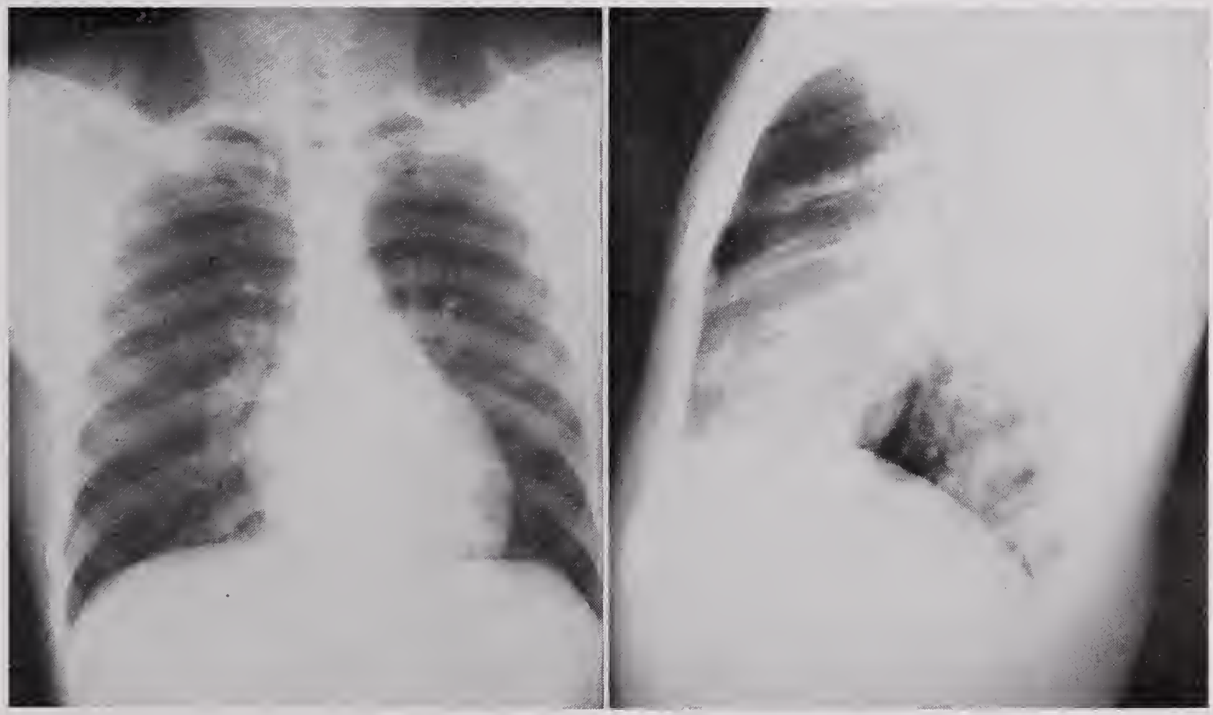

Figure 4. Chest x-ray films (PA and lateral) following Amphotericin B treatment (April 30, 1970).

and mycelial growth at room temperature. This fungus is thought to be present in the soil.[4] The endemic area centers in the Ohio and Mississippi River Valleys and on the western shore of Lake Michigan; hence, the disease is occasionally called the "Chicago disease."

Blastomycosis is a chronic granulomatous and suppurative disease and its onset may be at any age, although it has developed between 30 and 50 years of age in the majority of the reported cases, and about 80% of the patients have been male. The occupations with a high rate of infection were those who had a fairly constant exposure to the environment, namely loggers, farmers, laborers, night watchmen, and heavy equipment operators.

Unfortunately, the mechanism of its transmission to man is not well established: one school believes that the primary lesion occurs most commonly in the skin and spreads slowly through the subcutaneous tissue and becomes generalized by the way of the blood stream.[3] Another school postulates that the primary site of infection is the lung through the inhalation of *Blastomyces dermatitidis* spores. Although many cases of pulmonary blastomycosis also have skin lesions, they are thought to be due to the hematogenous spread from the primary lesion in the lung.[9]

The blastomycosis cooperative study of the Veterans Administration in 198 proven cases[5] shows that indeed the most frequent sites of involvement are the skin and the lung: 69 patients had pulmonary and skin lesions simultaneously. At the same time, however, the involvement of a single organ alone is equally evident as indicated by the single lesion confined to the skin in 37 cases and to the lungs in 40 cases. The evidences for primary site of infection with blastomycosis in the skin or in the lungs are also convincing; as early as 1903, a case of primary cutaneous infection was reported in a 28 year-old physician who contracted blastomycosis inadvertently during an autopsy through a knife wound.[2] Conversely, a case of primary pulmonary infection was noted recently in a 36 year-old bacteriology technician.[8] Since *Blastomyces dermatitidis* is demonstrated in almost all human organs including the skin, the lung, the bone, the spleen, the brain, the prostate gland, the thyroid gland and the adrenals[5], it may be said that *Blastomyces dermititidis* is transmitted to man either through a cutaneous route or by way of the lung. The clinical history of our case in this paper began with cutaneous wounds which did not heal initially. Retrospectively, it is most unfortunate that no culture of drainage material was made at the early stage of the disease, because it could have shown clearly the port of entry of *Blastomyces dermatitidis.* Assuming the cutaneous entry of the fungus, the incubation period from the time of injury to the onset of the symptoms with cough, fever, and chest pain was 3 to 4 weeks.

The symptoms which impressed us most in our case were the cough, mostly nonproductive, and hemoptysis. These symptoms continued throughout the first several weeks when various antibiotics were administered. The cough was incessant, having a distinctly different character from those encountered in other pulmonary infections such as pulmonary tuberculosis, pneumonia, or chronic bronchitis.

The golden rule to research for a fungal or viral infection when ordinary antibiotics fail to improve the symptoms is reaffirmed in our case. Despite large doses of potent antibiotics, the distressing symptoms of spiking fever, cough with occasional hemoptysis, and chest pain persisted until the antifungal therapy was initiated. Theoretically, these symptoms could be caused by other infections such as tuberculosis or viral infection. The possibility of pulmonary tuberculosis was, however, remote because of negative PPD-S skin test and negative sputum stains for acid-fast bacilli, although the disseminated pulmonary tuberculosis could not be ruled out under the circumstances. The possibility of viral infection was considered remote in view of the negative cold agglutinin test and leucocytosis. Since the culture of fungus in the suitable media takes at least 4 to 6 weeks, the antifungal therapy was the only choice left in this case. The response to the latter treatment was dramatic and strengthened our diagnosis of fungal infection. However, it was not until the 38th day after the initiation of Amphotericin B therapy that we had a definitive diagnosis.

Amphotericin B is the choice of drug in almost all fungal diseases except actinomycosis and nocardiosis. Although it is often effective as shown in our case, it is a toxic drug which must be administered with considerable caution. Among the toxic reactions, the most common ones are (1) impairment of renal function, (2) bone marrow depression, and (3) hypokalemia.[6] All three signs of toxicity were observed in our case; and, in particular, the azotemia was most pronounced, requiring careful adjustment of daily dose. None of these toxic reactions were permanent, however; and BUN, hematocrit, and serum K returned to normal following the cessation of administration of Amphotericin B.

The recommended total dosage of Amphotericin B in the treatment of systemic mycosis in man is from 1 to 2 gm. In our case, we terminated the treatment after a total dose of 1 gm because of a complete disappearance of symptoms and excellent clinical condition of the patient. A recent report[6] contains data on those who have received Amphotericin B from 3.0 gm to 12.8 gm! It appears that the impairment of renal function is not necessarily related to the total dose administered because a patient who received a total dose of 12.8 gm had a maximum BUN of 41 mgm% in contrast to several patients with BUN of 70 mgm% following a total dose of only 2.0 gm.

ACKNOWLEDGMENT

The authors wish to express their gratitude for assistance received from the following physicians and bacteriologists in a survey of the incidences of blastomycosis in the Omaha area: C. S. Moran, M.D.; J. R. Schenken, M.D.; E. G. Greene, M.D.; D. G. Halkias, Ph.D., and H. Elson, M.S.

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Unlock the Door on Youth Problems: The Adolescent from Eleven To Sixteen Years*

PART I

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ABSTRACT

THIS paper discusses some of the problems confronting the adolescent especially between the years from eleven to sixteen. Problems of competition, of learning, of school adjustment and of family separation are presented.

In a previous paper, the broad realms of the adolescent years and the various fundamental changes that occur were discussed. 1. In this present paper, some areas of difficulty will be explored in greater detail.

Introduction

The material presented in this paper will be divided into six areas of endeavor which the adolescent must face and develop techniques to handle and to apply in his daily task of evolving into a responsible, contributing adult member of society.

First Area of Endeavor

The major task confronting the young adolescent is learning to accept himself, with his own assets and deficits. The young adult is very self-conscious of his own physical make-up and the physical and emotional changes which are occurring within himself. Some of these changes include growing taller, developing secondary sexual characteristics, moodiness, emotional lability, and solidification of personality traits. This rate of change varies with the individual on a physiological rather than on a chronological basis. I.

There are many physical differences between boys, between girls, and between boys and girls. Girls usually undergo their physical changes earlier than boys. Some mature physically and sexually more rapidly than other girls. This may produce some social adjustment problems if the younger girls are physically attractive to older boys.

Some boys physically outstrip their peers. This maturity gives them a decided advantage for a while in competitive athletics. These physical differences complicate the problems of the teenager who is striving to accept himself as he really is physically with the attendant advantages or handicaps of these physical changes. For example, there are boys who wish to run, but cannot run fast enough; there are boys who wish to play sports but are too small to be considered; and there are girls who wish to be physically and sexually well developed, but who have not started to show bodily changes.

Some people have to learn to accept the variability in physical capacity to do manual labor. Some have greater stamina than others and are less fatigued with ordinary activities, or are able to assume a large variety of extra activities. The smaller or less physically endowed adolescent must learn to develop compensatory skills.

The adolescent must begin to decide early in his schooling years what type of extracurricular activities in which he may wish to participate. The activities may involve scholastic competition or athletic competition. It is very difficult to partake of sports and scholastic activities such as debate, public speaking, music, or dramatics. A major decision must be made early in the school year, or the student may not be able to compete in the area of his choice. Unfortunately, there seems to be a stigma against competing scholastically, and many adolescents forego these opportunities for fear of being labeled an intellectual. Sport competition has been oversold to the detriment of scholastic competition and participation.

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The next area of acceptance of self is both an extension of the physical self and a delineation of the psychological self. For the adolescent, this involves the very important problem of learning to assume his or her own sex role and sex identification.

The adolescent may be physically attractive or unattractive; how well the young person can accept unsightly cosmetic problems such as protruding ears, a large nose, small breasts, underdeveloped genitalia, or delayed puberty beyond most of their own peer group is a major adjustment. Many other items like obesity become a major hurdle for this person. The ability to erect a compensatory personality facade within the youth's own mind to protect the adolescent's own self worth from ridicule becomes a very vital need and necessary skill.

The adolescent tends to hide behind an outer personality shell which may or may not be a reflection of his own inner self image. The adolescent often does not know or recognize his own inner self. This lack of knowledge of self may lead to a fear of himself and an extreme lack of self-confidence.

The young person often does not want to confront himself as a person because he is afraid of what might be found and what might be revealed. To offset this ambivalence about self, many efforts have to be made to help the young person understand who he is, what he is, where he is, where he is going, and how he is going to get there.

This adolescent must learn that he has some positive, constructive feelings about himself containing good points and assets, and he also has some negative, destructive feelings about himself. Teachers are in a unique position to observe some of these situations and feelings and to help the teen handle these feelings comfortably.

The teachers see adolescents under different types of circumstances. The teacher may see an adolescent at one end of the emotional spectrum who says that "I'm the greatest," or "get out of my way here I come," or the teacher may see the adolescent on the other end of the scale who shows the extreme pain of emotional unworthiness, the inability to accomplish anything, or as unable to strive to compete in any area of activity. By developing a close communicative relationship with the adolescent, the teacher is in a position to offer advice and counseling help to the adolescent in order to help him handle these feelings. With honesty and empathy, the teacher's attitude and example can do much to help manage or dispel these various feelings.

The coach plays a major role in the adolescent's development concerning competition and self discipline. Competition is a necessary part of our life; but how is it oriented? How is it fostered? What type of pressures evolve from this competition?

There is the overly-competitive individual who wishes to win at any price. He is very happy to see somebody else undergo the agonies of losing. The coach must help this adolescent develop a healthier competitive attitude towards self, towards winning and losing, towards physical demands and necessary self-sacrifice for the team, and towards the adolescent's own individual goals and dreams. The coach, through his close respected relationship with the adolescent, can help keep his defeats and successes in proper perspective and balance.

There is the individual who is under-competitive, who won't get into the arena and compete with his classmates, and who strives to make himself physically unattractive. He will escape by some means whether it be obesity, fatigability, or indwellingness. The coach can encourage some other area of activity where this teen can learn to make a contribution to himself and to his peer group such as student manager, cheer leader, or related activity.

What about the problem of grades? Obviously, there is too much emphasis on grades. This over-emphasis leads to the situation of cheating, condoning cheating, or just giving up scholastically. Grades tend to divide people to an unhealthy degree. The bright student is especially vulnerable. Unless he can perform well in some other area of activity, he is likely to be looked upon as an intellectual square or "pointy head" and to be cut off from his peers.

Those adolescents with less mental ability are looked down upon by the bright students and are further discouraged. Grades tend to encourage a hyper-categorization by teacher and students, which may be accentuated by the school's use of the ability track system.

The excitement of individual thinking and learning for the sake of learning seems to have been lost somewhere in the present academic processes. Too much emphasis is placed on rote memory and stereo-type procedures in place of individual thinking and creativity. Recently, some school systems have moved into trying various methods of teaching and have developed different types of academic processes. There seems to be more elasticity developing with fewer required subjects and more flexibility in some of the teaching methods. The use of subject track systems, modular scheduling, team teaching, individual study programs, pass-no credit courses, and small discussion groups are evidence of change and innovation to make learning more challenging and interesting.

There are the problems of the specific school learning disorders and minimal cerebral dysfunction,[2] which are becoming more prevalent to everyone. It is estimated by many sources that these disabilities may affect one in every ten children in the classroom. If the teen does not have a maturational lag in the area of learning skills so he may "grow out of it," he may learn to compensate and adapt his abilities around the specific disability area. However, if he is not capable of adapting and other associated forces compound the stress reaction of social disease, he may proceed from the multifaceted personality problems usually inherent in the individual concerned, from personal discouragement, to defeat, to despair, and finally to personality decompensation; then he has but four alternatives: 1. Self-destruction as evidenced by alcoholism, drug usage, promiscuous sex, suicide, or retreat into personality fragmentation and schizophrenia. 2. Social rebellion as evidenced by vandalism, riots, or anarchy. 3. Juvenile delinquency as evidenced by theft, mugging, and other related acts. 4. Mental dropout and then physical dropout of the academic setting or even society.

Second Area of Endeavor:

There is the problem of learning to accept one's self in relationship to a group. As a youth moves into the junior high and then the senior high years, he is confronted with an enlarged number of teachers. He may go from a classroom with one or two teachers, with whom he has been dealing in the elementary grades, to multiple teachers in the secondary schools. Each teacher has different demands. Each teacher has a different personality. Each teacher has different expectations from the adolescent.

The adolescent is now faced with adapting to various means of communication with many different people in the teaching field. He may be confronted with the situation, for the first time, of having male teachers. Many of his elementary school years have been overwhelmingly weighted with female teachers and with different demands and expectations by these teachers. The impact of the individual teacher on the youth is now much more apparent than it was before. This can be in a positive, constructive manner; or in a very negative, destructive manner, depending upon the personality, the attitude, and the technic of operation of the teacher. Screaming, ridicule, and destructive criticism have no place in handling and working with teen-agers. The teen needs as much positive ego strength as he can get from all possible sources — especially from home and school. At the same time, the teacher must learn to cope with a host of new changes and challenges within the system itself which changes the teacher has never confronted before such as school district consolidation, transportation problems and bussing, altered curriculum, new methodologies of teaching and shifting facilities, altered economic and racial patterns, plus integration. Many times, the teacher has not received any formal training to handle any of these situations and must endeavor to makeshift or improvise solutions for these problems, much to the teacher's dismay and confusion.

The new modular scheduling school system poses an entirely new series of adaptations. With team teaching, there may be less personal contact with the course leader, resulting in very little continuity of communication and expectation between the student and the teacher. The poorly organized student, or the less able student, has trouble coping with the apparent large amount of free time available and as a direct result his study habits, which are already in jeopardy, become very fragmented. Chaos frequently results.

The size of the school, whether this be a small rural school or a large urban school of three thousand students, has its impact both socially and competitively. The size of the classroom will determine how much this teen can accomplish. He may go from a small class of 25 or 30 students to 40 or 50 students. He will endeavor to gain the necessary educational information that he needs from this particular class setting, competition, and distractions.

In many communities, the classroom competition will vary with the type of location and composition of the individual school. It can be a classroom with an average ability achievement level, or it can be a very highly competitive, usually suburban type of community school with a classroom ability achievement level of above average. All of these factors will have a tremendous impact upon the teen, how he feels about school, his feelings of success, his accomplishments, his ability to adapt to these surroundings, and his handling of the various types of competition he encounters — social, sports, and academic.

Pathogenesis of Arthritis

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CURRENT concepts of the pathogenesis of gout, rheumatoid arthritis, and primary osteoarthritis will be reviewed.

Gout

This disease has been known from antiquity but our knowledge of the pathogenesis is more recent. It is generally conceded to be an inborn or hereditary metabolic defect of purine metabolism. It was believed to be inherited as a dominant trait with variable expression but there is increasing evidence that the inheritance is polygenic. It is possible that more than one genetic defect may lead to gout and that inheritance of these defects is not uniform. A positive family history is obtained in only 10 to 20% of cases but 15 to 25% of blood relatives of gouty patients have hyperuricemia.[1]

The aphorisms of Hippocrates give us some additional hints:

"29. Eunnuchs do not take the gout.
"29. A woman does not take the gout unless her menses be stopped.

"30. A young man does not take the gout until he engages in coition.[2]"

Gout is largely a disease of sexually mature males. Although hyperuricemia is common in female members of gouty families only 5% of acute cases of primary gouty arthritis occur in women, and then usually after the menopause.

In 1964 Lesch and Nyhan described a neurologic disease characterized by sex linked inheritance, mental retardation, choreoathetosis, compulsive self mutilation, and severe hyperuricemia.[3] The latter is often associated with uric acid renal stones and nephropathy with uremia. The patients suffer from a congenital absence of H-G PRT (hypoxanthine-guanine phosphoribosyl-transferase). This enzyme normally recycles the purine bases, guanine and hypoxanthine to their ribonucleotides, guanylic acid and inosinic acid. The latter are feed back inhibitors of de novo purine synthesis. Without H-G PRT purine synthesis is unlimited.[4] Partial H-G PRT deficiency has now been described in adult patients with rather severe gout. Again the defect appears to be sex linked. Hyperuricemia is also associated with von Gerke's glycogen storage disease (Type I) which is due to glucose-6-phosphatase deficiency.[5] Other studies have shown reduced urate-protein binding in some kindreds with gout. It seems evident that primary gout patients are a heterogeneous group who have varying genetic abnormalities which are phenotypically expressed as gout.

Granted that excess uric acid is a prerequisite for gout; the mechanisms by which the actual joint inflammation develops have been fairly well studied. Monosodium urate crystals precipitate into the joint and are phagocytized by polymorphonuclear cells in the synovial fluid. Chemotaxis attracts the PMN cell into the joint and thereby plays a key role.[6] Colchicine works by inhibiting the motility of the polymorphonuclear leukocyte.[7]

Finally one must be aware of yet another defect in gout There is persistent undue acidity of the urine which correlates with a deficiency of ammonia production of 25-30%. This acid urine reduces solubility of urates and fosters stone formation. A deficiency of glutanimase has been postulated but not proved.[8]

Rheumatoid Arthritis

The pathogenesis of rheumatoid arthritis is less well understood and more effective treatment of this disease will probably await either better knowledge of basic mechanisms or serendipity. Theories regarding the pathogenesis may be grouped into three general categories, and all three mechanisms are probably involved.

Heredity: Studies of identical twins have established that the disease may be found in only one of a pair of identical twins. Earlier studies showing familial aggregation of cases can be explained on common environmental influences resulting in pseudogenetic transmission. Examples of this phenomenon are found in the vertical transmission of viral neoplasms in experimental animals and in the transmission of kuru in New Guinea by the cannibalistic habits of the Fore tribe. Although direct genetic transmission is unlikely, heredity factors may be operative in the pathogenesis similar to the increased-susceptibility to rheumatic fever in some families. Sex-linked recessive agammaglobulinemia clearly predisposes to the development of rheumatoid arthritis and other connective tissue syndromes.[9]

Immunity: There is abundant evidence that immunologic aberrations occur in rheumatoid arthritis and related syndromes. Host immunoglobulin and complement components can be identified in lesions by immunofluorescent techniques. There is indirect evidence that autologous antigens participate in immune complex formation and subsequent vascular injury. Phagocytosis of immune complexes formed between rheumatoid factor and gamma globulin results in degranulation, releasing lysozymes and other hydrolytic enzymes into the joint.[10] (See Figure I).

Infection: What precipitates the foregoing altered host immunity? There is much current revival of interest in the possibility of underlying microbial disease.[11] The isolation of Mycoplasma organisms provoked much interest three or four years ago,[12] but subsequent studies have failed to demonstrate antibody titers to these organisms in any appreciable number of patients or to confirm the isolation of these organisms by sensitive culture methods.[13] In 1969 Warren reported the induction of rheumatoid arthritis in mice by the injection of an active agent from human rheumatoid synovial membrane. The disease so produced can be transmitted vertically to the offspring of these mice. The transmitted agent is also capable of remaining latent for several months, i.e. apparently well females can transmit the disease to their offspring several months before becoming ill themselves.[14] Perhaps such an infectious agent precipitates or alters host immune reactions analogous in part to the role of streptococcal infection in initiating rheumatic fever.

If a specific agent can be identified there is hope of eventually designing chemotherapy to combat it. In the meanwhile anti-immune therapy offers some promise.

Primary Osteoarthritis

Osteoarthritis is often considered to be a disease of aging, joint wear and tear, and obesity. There is increasing evidence that we should modify these traditional concepts. The disease does attack senior citizens but it is also true that the aging of their cartilages is a very spotty thing. Thus why should we see involvement of only one hip with severe changes while the opposite joint is completely spared. Clearly both cartilages are of the same age.

Saville and Dickson have reported an excellent epidemiologic study of body weight in osteoarthritis of the hip. They found that "men and women with primary and secondary osteoarthritis of the hip are not heavier than normal Americans. Furthermore the heavier ones do not consult an orthopedic surgeon with symptoms earlier than the lighter ones.[15]" On the other hand, Bauer has found that patients with osteoarthritis of the knees are heavier than controls.[15] In considering the problem of weight we must recall that the ankle, one of our most heavily used joints, is rarely affected in osteoarthritis, whereas chondromalacia of the posterior surface of the patella, and Heberden's nodes of the fingers (both non-weight bearing joints) are common. In the latter joints,

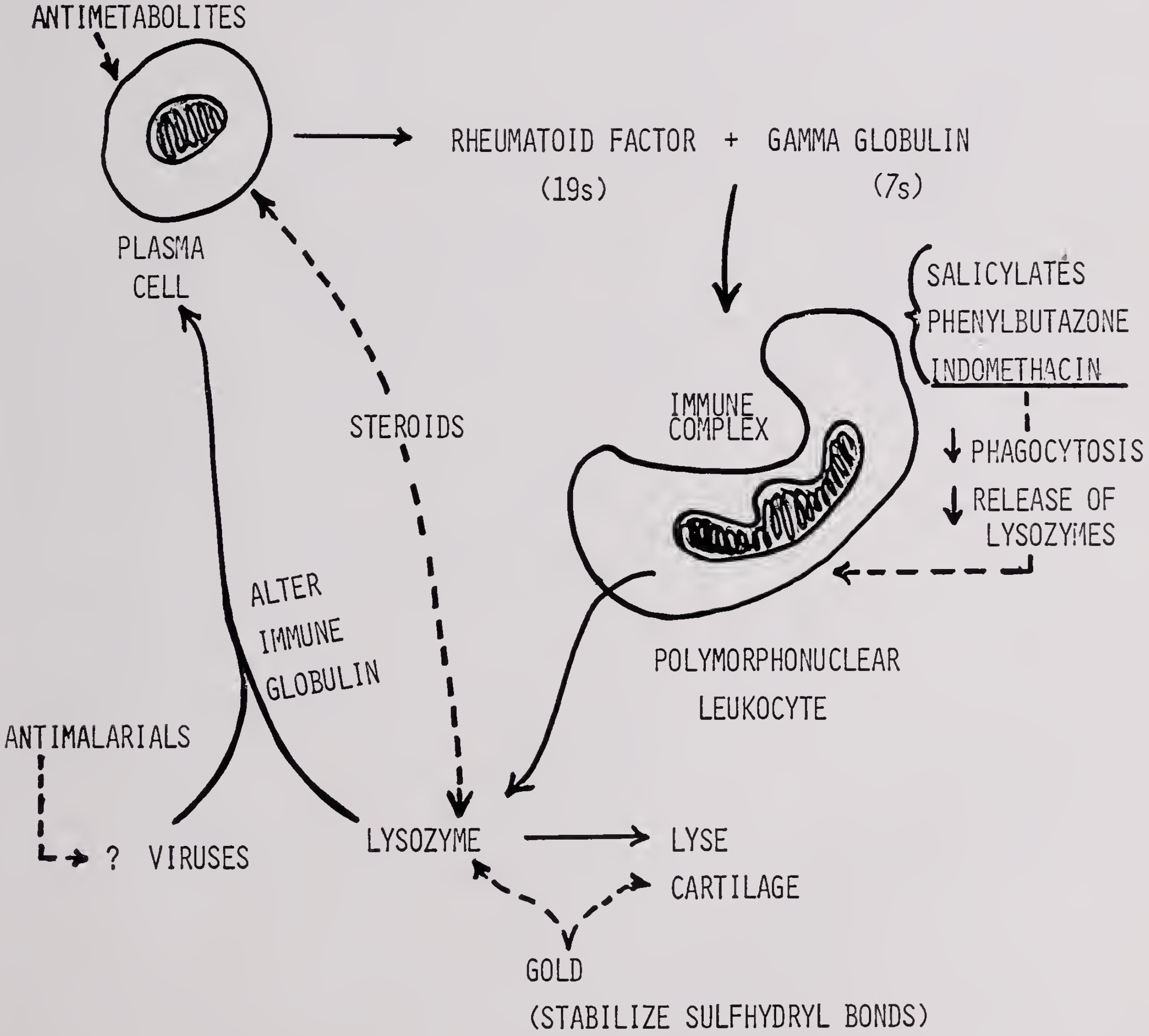

Figure I

SCHEMATIC REPRESENTATION OF THE PATHOGENESIS OF RHEUMATOID ARTHRITIS WITH PROPOSED ACTION SITES OF EFFECTIVE DRUGS as well as the hip joint, most of the stress on the joint is from the tendinous insertions of powerful muscles. The pull of these muscles creats shearing forces far greater than any compressive force that occurs from weight bearing even in the obese individual.

These shearing forces may result in cartilage breakdown. Osteoarthritic cartilage is characterized chemically by loss of matrix components, particularly polysaccharides. This occurs just beneath the joint surface resulting in erosion of cartilage. Isotopic turn over studies actually demonstrate an increased synthesis of polysaccharides by the abnormal cartilage. It follows then that increased degradation is present. Theoretically this could be the result of increased penetration of hyaluronidase from synovial fluid into cartilage.[16]

Genetic factors also pertain but are probably not primary in most instances. For example, posture and joint alignment vary on a hereditary basis. The maximum rate of synthesis of polysaccharide by cartilage

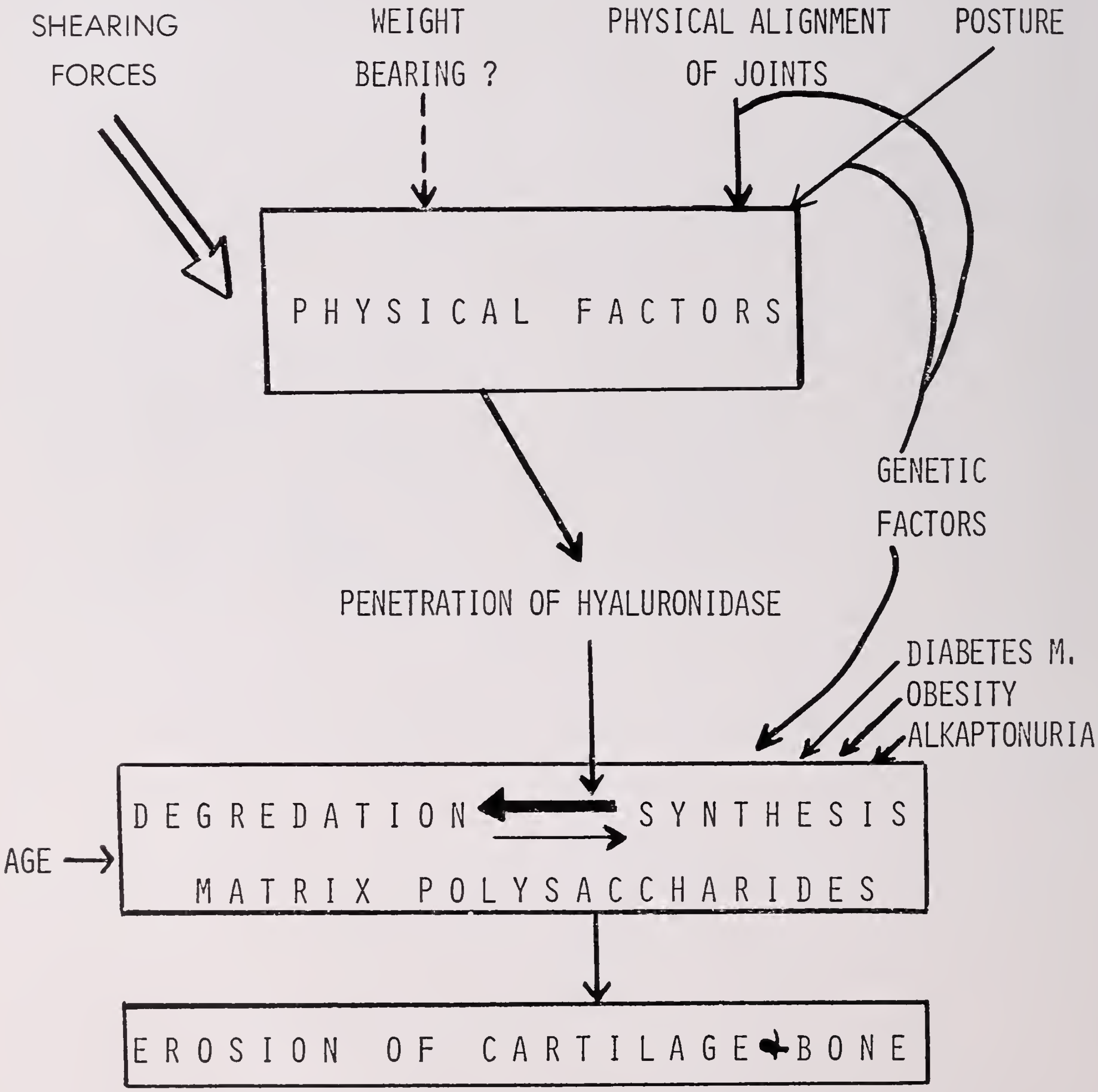

Figure II

PATHOGENESIS OF OSTEOARTHRITIS

cells in response to augmented polysaccharide breakdown could be genetically determined. From a metabolic viewpoint, increased incidence of osteoarthritis is seen in diabetes mellitus, alkaptonuria, and certain nutritional diseases (i.e. Kashin-Beck disease). If association with obesity is present, the relationship may be nutritional rather than weight bearing per se. Altered bone growth as well as alterations in maintenance of joint tissues may occur in obesity. Hormonal changes are known to influence osteoarthritis. Androgens promote and estrogens inhibit the development of degenerative changes. Growth hormone in acromegaly causes thickening of the articular cartilage. The altered joint contours result in unusual stresses that promote osteoarthritis changes.[16] (See Figure II).

Summary

We understand much about the basic mechanisms in gout. Several enzymatic defects inherited in variable patterns all have the accumulation of excessive uric acid as a common denominator. Altered host immunity appears to underly the sequence of events that leads to rheumatoid arthritis. Much current interest is again centered on the role of possible infectious agents in initiating this altered immunity. Experimental models now exist. A multiplicity of factors are operative in osteoarthritis. Current epidemiologic evidence tends to cast doubt on some of our older concepts regarding the role of obesity and wear and tear on weight bearing joints. Osteoarthritis may represent a mosaic of related syndromes with joint destruction as the common endpoint.

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Highlights of Auscultation in Acquired and Congenital Heart Disease-1*

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THE heart speaks in a language of its own; its vocabulary consists essentially of sounds and murmurs. Once the vocabulary is understood, considerable insight can be gained into the anatomic and physiologic condition of the heart and circulation.

The Mitral Orifice

The commonest cause of *obstruction* at the mitral orifice is rheumatic mitral stenosis. The auscultatory hallmarks of this disorder consist of a loud first heart sound, increased intensity of pulmonary valve closure, an opening snap, and a middiastolic murmur followed by presystolic accentuation. The skilled clinician not only understands the mechanisms of these signs but also understands how best to elicit them. A loud first heart sound and an opening snap imply good valve mobility and together are features of tight mitral stenosis. Accordingly, these auscultatory events would not be expected in the presence of immobilizing calcification of the leaflets or considerable mitral incompetence. Similarly, a loud pulmonary closure sound (best judged during inspiratory splitting of the second heart sound) reflects an elevated pressure in the pulmonary trunk. A presystolic murmur implies sinus rhythm and dominant mitral stenosis, so that this murmur vanishes with the advent of atrial fibrillation or appreciable mitral incompetence. In the presence of atrial fibrillation, the duration of the middiastolic murmur is an accurate mirror of the degree of stenosis; a middiastolic murmur that continues up to the end of diastole means that the gradient continues to the end of diastole, implying that stenosis is sufficient to prevent the left atrium from effectively emptying.

It is important to remember that the auscultatory signs of mitral stenosis are best heard over the *left ventricular impulse*. It is mandatory that the bell of the stethoscope be placed *precisely* over this impulse which is most readily located by palpating the region of the apex while the patient partially turns to the left. The physiologic effects of turning serve the additional useful purpose of transiently increasing the intensity of the murmur; coughing has a similar effect. Unless the proper positions and maneuvers are employed, the auscultatory signs of mitral stenosis can be overlooked. *Silent* mitral stenosis is rare but may occur when severe pulmonary hypertension causes such enlargement of the right ventricle that it displaces the left ventricle impulse from the chest wall.

Mitral *incompetence* is accompanied by the prototype of the holosystolic murmur, i.e. a murmur that begins with the first heart sound and goes throughout systole up to the second heart sound. Such murmurs are generally maximal at the cardiac apex, although variations must be understood. The murmur of mitral incompetence is known to radiate to the axilla and back, but it occasionally radiates to the left sternal edge, base, and even into the neck where it may be mistaken for the murmur of aortic stenosis. The murmur of aortic stenosis itself — especially in older patients — may be well-heard if not best heard at the apex and incorrectly ascribed to mitral incompetence; this error can be avoided if it is remembered that the murmur of aortic stenosis — irrespective of its chest wall location — is *mid*systolic and ends before the second heart sound (see below).

There are two important deviations from the classic holosystolic murmur of mitral incompetence. A *late* systolic murmur preceded by one or more systolic clicks may accompany prolapse of a redundant posterior mitral leaflet. Although the degree of mitral incompetence is generally mild in such patients, it is important to recognize the significance of clicks and late systolic murmurs since the deranged mitral valve is susceptible to bacterial endocarditis. An *early* systolic or *decrescendo* systolic murmur is a feature of *severe* mitral incompetence of recent onset as with ruptured chordae tendinae; under these circumstances, the major part of regurgitation occurs in early systole since a very high left atrial pressure results in a striking increase in the resistance to left atrial filling in latter systole.

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The Tricuspid Valve

The murmur of tricuspid stenosis is commonly missed even though this valvular defect occurs in 2 - 3 percent of patients with rheumatic mitral stenosis. Several guidelines set the stage for clinical recognition. The murmur is confined to a localized area along the lower left sternal edge, is presystolic with sinus rhythm and middiastolic with atrial fibrillation. The most distinctive feature is the selective inspiratory increase in loudness; during inspiration the tricuspid gradient increases and with it the intensity of the murmur.

When tricuspid *incompetence* occurs with an *elevated* right ventricular systolic pressure (pulmonary hypertension or congestive heart failure), there is a high velocity of regurgitant flow throughout systole and a relatively high frequency holosystolic murmur that selectively increases during inspiration (Carvallo's sign). Occasionally tricuspid incompetence occurs with *normal* right ventricular systolic pressure as with Ebstein's anomaly or following tricuspid endocarditis caused by "main line" administration of addictive drugs. Under these circumstances, a low velocity of regurgitant flow occurs chiefly in early systole so the murmur is relatively low frequency and early systolic but still selectively increases during inspiration.

The Aortic Valve

The aortic stenotic murmur is the model of the midsystolic murmur, crescendo-decrescendo in shape, beginning after the first heart sound or with an ejection sound, and ending before aortic valve closure. In valvular aortic stenosis the murmur is maximal in the second right intercostal space with radiation upward, to the right, and into the neck. In older patients, especially those with calcific aortic stenosis, the murmur in the second right interspace may be harsh and grunting whereas the murmur at the apex pure and musical. It is important to remember that the classic midsystolic murmur of aortic stenosis is sometimes absent altogether in patients with severe obstruction; left ventricular failure may result in a substantial decrease in flow across the stenotic valve with disappearance of the midsystolic murmur or replacement by the holosystolic murmur of mitral incompetence. In the presence of an increase in anteroposterior chest dimensions (emphysema) the basal murmur may soften or vanish although radiation into the neck persists.

The typical murmur of aortic *incompetence* is readily recognized especially when loud and accompanied by bounding arterial pulses. However, faint high frequency murmurs of mild aortic incompetence are difficult to hear and must be especially sought by applying very firm pressure of the stethoscopic diaphragm to the mid-left sternal border while the patient sits or stands, leans forward, and holds the breath in full expiration. Squatting — by raising aortic root pressure — tends to augment these faint murmurs and serves a useful purpose in their detection which is important because of susceptibility to endocarditis. The direction of the blowing early diastolic murmur should be determined by comparing its loudness along the left and right sternal borders especially at the third intercostal spaces. Prominent radiation to the right sternal border suggests a non-rheumatic etiology such as aortic root disease or specific cusp deformity.

Reversibility of Pulmonary Hypertension And Reduction of Right-to-Left Shunt: Report of a Patient with Chronic Bronchitis

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PULMONARY vascular sensitivity to hypoxia has been well demonstrated in chronic obstructive pulmonary disease;[1] the lowered oxygen tension has a major part in the production of reversible pulmonary hypertension.[2] The physiologic response to alveolar hypoventilation seems to vary with hypoxia and hypercarbia, and this variability may result from individual differences in pulmonary vascular reactivity. Grover and Reeves[3] have demonstrated a pulmonary vascular hyperreactivity to hypoxia in approximately 20% of normal persons at high altitude.

In the case reported herein, chronic airway obstruction with resultant hypoxia was the primary cause of the severe pulmonary hypertension. The pulmonary hypertension and elevated right-sided pressures opened a right-to-left shunt through the foramen ovale. Both the pulmonary hypertension and right-to-left shunt were reversed almost to normal with treatment that included low-flow oxygen. The reversibility of pulmonary hypertension has been shown in upper airway obstruction in association with hypertrophied adenoids or tonsils in children[4] and in airway obstruction with hypoxemia in adults.[5] The main reason for the case report is to document that pulmonary hypertension secondary to chronic obstructive pulmonary disease can result in a large right-to-left shunt at an atrial level, and that this may be reversible with treatment.

Report of a Case

A 47-year-old man was hospitalized because of shortness of breath, cough, sputum, and increasing somnolence. He had smoked one package of cigarettes per day for 35 years and was smoking one package per day before his admission to the hospital. He had been cyanotic for more than a year. In the past 10 months, he had required phlebotomy on the average of once every month. Since January 1970, he had noticed ankle swelling, and in the past 6 weeks, he had complained of increased somnolence.

On physical examination, he was slightly obese, lethargic, and cyanotic at rest. Respiratory rate was 28/min, blood pressure 120/72 mm Hg, and pulse 90/min. The anteroposterior diameter of the chest was increased. The diaphragm moved less than 2 cm, and expansion was less than 2 inches. Hyperresonance to percussion and decreased breath sounds in both bases were noted. There was expiratory slowing of grade 4 (on the basis of 1 to 4). There was normal splitting of the second heart sound. The liver was palpated three fingerbreadths below the costal margin. The remainder of the physical examination revealed no abnormalities.

A roentgenogram of the chest showed evidence of a calcified granuloma in the left midlung field. An electrocardiogram prior to treatment showed an abnormal left axis deviation with ST and T-wave changes in the right precordial leads.

The urine, blood count, creatinine level, blood sugar level, serologic test, and levels of sodium, potassium, and chloride were all normal. Sputum culture grew *Diplococcus pneumoniae.*

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Pulmonary function (Table 1) showed evidence of severe obstruction, with the maximal breathing capacity of only 53 liters/min and a midexpiratory flow rate of 0.3 liter/sec.

Cardiac catheterization (Table 2) disclosed increased pulmonary artery pressure (74/28 mm Hg) and right ventricular systolic and end-diastolic pressures (73/7-14-16 mm Hg) and a large right-to-left shunt at the atrial level, presumably through a patent foramen ovale (shunt of 22%).

Arterial blood gases showed hypoxia (35 mm Hg) at room air (Table 3).

The patient was treated with low-flow oxygen at 2 liters/min continually, and was exercised with an oxygen-supported walker at 5 liters/min for 20 minutes three times a day. Diuresis resulted in a loss of 23 lb, and the patient was digitalized with digoxin. One pint of blood was removed, decreasing the hematocrit value from 60% to 52%. The patient was treated with intermittent positive-pressure breathing and bronchodilator by nebulization four times a day, oral bronchodilator four times a day, ampicillin 500 mg four times a day, high intake of fluids, postural drainage, chest physiotherapy, a diet low in sodium (45 mEq/day), and an oral diuretic each day. He improved dramatically.

Ten days after treatment, the electrocardiogram showed less T-wave change; pulmonary function (Table 1) showed improvement in vital capacity, maximal breathing capacity, maximal midexpiratory flow, and CO-diffusing capacity. Right heart catheterization (Table 2) showed a significant decrease in pulmonary artery and right ventricular pressures (74/28 to 44/6, respectively) and a significant decrease in the right-

Table 1.--Pulmonary Function of Patient With Pulmonary Hypertension and Right-to-Left Shunt

		June 17, 1970		June 29, 1970	
	Estimated normal	Before treatment	Before treatment and after bronchodilation	After treatment	After treatment and after bronchodilation
Vital capacity, liter					
Expiratory	4.5	2.35	3.49	4.29	4.67
Inspiratory	4.5	2.77		...	
Residual volume (RV), liter	1.5	3.44		3.23	
Total capacity (TC), liter	6.0	6.21		8.52	
RV/TC x 100, %	<35	55		50	
Functional residual capacity, liter	2.7	4.11		5.92	
Expiratory reserve, liter	1.2	0.67		1.00	
Maximal breathing capacity, L/min	119	53	70	87	112
Maximal midexpiratory flow, L/sec	>2.2	0.3	0.5	0.5	0.8
N_2 washout index, %	2.5 or less	8.7		11.4	
Arterial O_2 saturation, % (oximeter)					
Resting (air)	95-98	89		94	
Resting (O_2)	100	100		100	
Before exercise (air)	95-98	89		95	
Exercise (air)	No decrease	79*		90†	
Exercise (O_2)	100	87‡		100	
Ventilation (at sitting, rest, breathing O_2)					
Liters/min		10.25		9.20	
Rate, resp./min		22.0		15.7	
Average tidal volume, ml		466		586	
CO diffusing capacity, ml/min/mm Hg					
Exercise	24(18-30)	9		16	

*Much dyspnea on exertion, 2.6-minute exercise.

†Five-minute exercise.

‡Knees tired, 3.1-minute exercise.

to-left shunt (from 22% to 3%). In addition, there was no evidence of a left-to-right shunt on double-sampling indicator-dilution curves. Arterial oxygen tension at room air had increased from 35 to 53 mm Hg.

Discussion

Barach[6] introduced the concept of low flow rates of oxygen in 1938, but the importance of the concept of correcting hypoxia was not appreciated until Campbell[7, 8] in 1960 and Massaro and associates[9] and Kory and co-workers[10] in 1962 made comparative evaluations of oxygen therapy in respiratory insufficiency and described the importance of the manner of delivery of low concentrations of oxygen. It is well established that oxygen therapy is indicated in respiratory failure when hypoxia is present. Evidence has been presented in the literature to show that adequate oxygenation can be achieved when oxygen is administered at low flow rates by nasal cannula or Venti-mask; and $PaCO_2$ is not elevated in patients in whom hypercapnia is associated with hypoxia when oxygen is administered properly and monitored by arterial blood gases.[11-15]

In 1946, v. Euler and Liljestrand[16] observed that a lowered $PaCO_2$ raised the pulmonary arterial pressure in cats. Hurtado,[17] Penaloza and associates,[18] and Vogel and co-workers[19] have described the salient features of high-altitude pulmonary hypertension. A mild degree of pulmonary arterial hypertension associated with an increased pulmonary vascular resistance is normal in people who were born at high altitudes and who live there. Structural features[20] in the pulmonary vasculature appear to be the main cause for the increased pulmonary vascular resistance. Studies on normals at high altitude have revealed a conspicuous muscular medial coat at a precapillary level.[21] All evidence points to hypoxia as the predominant factor in constricting the pulmonary vascular bed. Fishman's study[2] of patients with chronic obstructive pulmonary disease revealed that hypoxia can constrict

Table 2.--Cardiac Catheterization Data While Breathing Room Air in a Patient With Pulmonary Hypertension and Right-to-Left Shunt

	Before treatment (June 19, 1970)		After treatment (June 30, 1970)	
	Pressure, mm Hg	O_2 saturation, %	Pressure, mm Hg	O_2 saturation, %
Femoral artery	150/70	53	142/72	83
Pulmonary artery	74/28	34	44/6	60
Right ventricle	73/16	...	44/6	...
Right atrium	23/7(a=23)	...	11/5	...
Superior vena cava	...	40	...	53
Cardiac index, L/min/sq mm	4.0*(Fick)		3.2 (dye curve)	
Pulmonary resistance, units	...		10.3	
Systemic resistance, units	27		23.3	

*This represents systemic flow as determined from measured oxygen consumption and systemic arteriovenous difference. Pulmonary resistance was not calculated because no measurement of pulmonary vein saturation was obtained.

the pulmonary vascular bed. Patients with chronic bronchitis often have pulmonary hypertension.[22] During an episode of acute respiratory failure, pulmonary arterial pressure is further increased; with treatment of such an exacerbation, the acute increase in pulmonary pressure will reverse to the level prior to the acute respiratory failure. Polycythemia and increased viscosity of blood apparently do not contribute to further elevating the pulmonary vascular resistance. Abraham et al[23] have shown no potentiation of an increase in blood volume on the elevated pulmonary arterial pressure in acute hypoxia. These authors[24] have shown, furthermore, that during acute illness, oxygen and acetylcholine reduced pulmonary artery pressures (sometimes to values seen after full recovery) in all but two patients in their series. Thus, the pulmonary vascular bed in patients who have chronic obstructive pulmonary disease with cor pulmonale and hypoxia may have variable degrees of constriction, depending on the degree of hypoxia and the degree of individual variability in pulmonary vascular reactivity.[1] A certain degree of reversibility in the pulmonary vascular constriction may exist.

ACKNOWLEDGMENTS

Dr. Robert L. Frye and members of the St. Marys Hospital Cardiac Laboratory performed the cardiac catheterization studies and compiled the catheterization data.

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Table 3.--Arterial Blood Gases in Patient With Pulmonary Hypertension and Right-to-Left Shunt

	June 19, 1970	June 23, 1970	June 29, 1970
FI_{O_2}	0.209 (room air)	... (O_2 at 2 L/min)	0.209 (room air)
Sample site	Rt. radial	Lt. radial	Lt. radial
Pa_{O_2}, mm Hg	35	72	53
Pa_{CO_2}, mm Hg	64	67	67
pH	7.35	7.37	7.42
Buffer base excess, mEq/L	7	10	15
O_2 saturation, %	63	94	88
Hemoglobin, gm/100 ml	14.6	15.8	14.6
Ventilation rate, resp./min	32	22	24

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Skin, Genetics, and Cancer: A Trilogic Approach to Cancer Control

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Introduction

IN spite of great improvements since the 1930's, cancer incidence has continued to rise at the rate of about 1 per cent per year! Indeed, close to 1 million Americans are currently afflicted with cancer, with new cases each year totaling over 615,000; the number of lives lost annually is more than 325,000![1] Only heart disease and related disorders reap a more tragic toll in morbidity and mortality.

It is therefore prudent that we as physicians attempt to utilize every possible shred of knowledge which might aid in the control of cancer. In this context we must realize that the skin, when observed critically, can serve as a beacon indicating the presence of a number of malignant neoplasms; genetic information can increase the possibility for cancer control even more.

The skin is readily accessible to critical observation and appraisal. When a patient's integument is studied in context with his environmental background and genetic endowment and/or their interaction, much useful information about skin aberrations might be forthcoming. All too frequently, however, evaluation of the skin has not included possible etiologic hereditary factors and surprisingly little attention has been given to the association of skin signs and genetic factors with cancer.[2, 3, 4] Therefore, the objective of this report is to focus attention primarily upon the relationship between skin findings and hereditary factors in context with their probable or known association with cancer of the skin or cancer of underlying organs or viscera.

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The skin contains a variety of components which are genetically determined. Most apparent, of course, is skin color and hair color, which are closely controlled by genetic and/or "racial" factors, of which the latter are also genetically determined. Other characteristics of hair, for instance whether it be curly, coarse, or smooth, are often racially or genetically determined. Hereditary baldness and premature graying of the hair occur in certain families and are also under genetic control. Such skin features as Mongolian spots, i.e., a cutaneous-subcutaneous pigmentation, often found in the sacral area of newborn children, are also due to racial or hereditary factors in that these occur regularly in members of oriental races, but are rarely found among caucasians. Many discrete genetic anomalies of skin such as piebaldness (autosomal recessive), ichthyosis simplex (autosomal dominant or sex-linked recessive in some families), keratosis pilaris (autosomal dominant), pityriasis rubra pilaris (autosomal dominant and incomplete dominance in some families), cutis laxa (autosomal recessive, though autosomal dominant has been reported rarely), alopecia areata (autosomal dominant), and acrodermatitis enteropathica (autosomal recessive), are just a few of what could be extended into a rather long list of skin lesions which, while not associated with cancer, are nevertheless controlled by simple genetic factors.[3] These conditions, while *not* related to cancer, are mentioned briefly in order to put the problem of genetics and skin into better perspective.

Cutaneous and Genetic Clues to Cancer

We advocate a trilogic approach to cancer comprehension and control through the application of the following: (1) physical clues manifested in the skin; (2) genetic information based on the significance of these clues and the family history; (3) diagnostic methods in the search for evidence of cancer. This approach is illustrated in Figure 1, a diagrammatic "equation" which if utilized systematically by the physician could lead to improved cancer control.

This problem is amplified significantly in Tables 1 to 4 which list skin lesions and diseases of man. These are inherited either under classical Mendelian control or are presumed to have a genetic etiology in certain families; *all* of these conditions are associated with cancer. Thus, Table 1 lists autosomal dominant, Table 2 autosomal recessive, and Table 3, sex-linked recessive in-

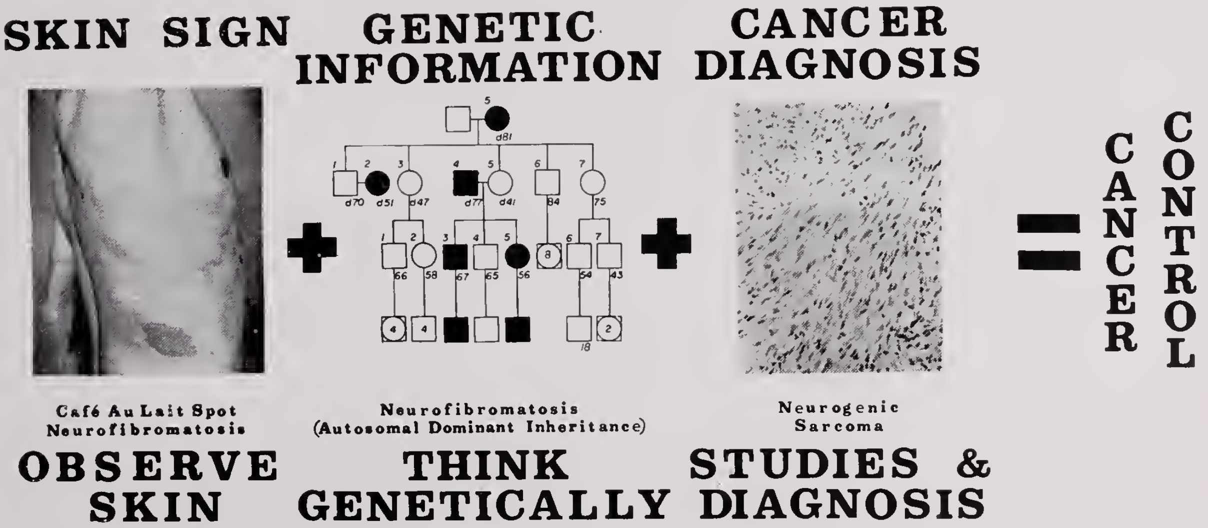

Figure 1. A diagramatic equation showing a patient with cafe' au lait spots and von Recklinghausen's neurofibromatosis. His family pedigree shows autosomal dominant inheritance and the histologic findings of neurogenic sarcomas, a relatively frequent complication of this disease.

herited conditions. Finally, Table 4 lists conditions wherein the role of hereditary factors is less clear; nevertheless, while classical Mendelian inheritance patterns have not been delineated, there is empirical evidence for a genetic etiology for these conditions in some families.

In order to shed light upon this problem, we shall discuss briefly a patient seen in genetics consultation by this writer at the M. D. Anderson Hospital and Tumor Institute in Houston, Texas. The patient was a 46-year-old white male with a diagnosis of multiple nevoid basal cell carcinoma syndrome (Fig. 2). This is just one of the many conditions listed in the tables which show a classical Mendelian mode of inheritance and here it is found to behave as a classical autosomal dominant. The syndrome is characterized by the presence of one or more congenital anomalies, the most significant of which, so far as the syndrome is concerned, is the presence of multiple basal cell carcinomas occurring on *any* area of the

Table 1

AUTOSOMAL DOMINANT INHERITANCE

Disorder	**Skin Manifestations**	**Manifestations of Other Systems**	**Predominant Cancers**
Neurofibromatosis	cafe' au lait spots, cutaneous neurofibromas, all sites, axillary freckle-like lesions, oral papillomatous tumors	multiple congenital anomalies	sarcoma, acoustic neuroma, pheochromocytoma
Gardner's Syndrome	epidermoid inclusion cysts, sebaceous cysts, dermoid tumors	osteomas, polyposis coli	adenocarcinoma of the colon
Multiple Nevoid Basal Cell Carcinoma Syndrome	multiple nevoid appearing basal cell carcinomas, benign cysts, hypokeratinized area of palms, "palmar pits," and soles	jaw cysts, rib and vertebral anomalies, neurologic and ophthalmologic anomalies, intracranial calcifications	multiple basal cell carcinomas
Cutaneous Malignant Melanoma	usually darkly and unevenly pigmented cutaneous growths, might be mistaken for junctional nevi	none	cutaneous malignant melanoma
Tylosis & Esophageal Carcinoma (Keratosis Palmaris et Plantaris)	tylosis of palms and soles	none	esophageal cancer
Tuberous Sclerosis (Bourneville's Disease)	adenoma sebaceum of Pringle, cafe' au lait spots, periungual fibromata, shagreen patch, fibromatous plaques	epilepsy, mental retardation, hamartomas in brain, kidneys and heart	intracranial neoplasms (astrocytomas, glioblastomas)
von Hippel-Lindau's Syndrome	vascular nevi of the face, angiomatosis of the retina, cystic lesions	cerebeller angiomatosis	hemangioblastoma of cerebellum, hypernephroma, and pheochromocytoma
Peutz-Jegher's Syndrome	distinctive pigmentation (melanin spots) of nose, face, and distal portions of fingers, of mucous membranes and lip	polyposis coli of intestinal tract except esophagus	adenocarcinoma of duodenum and colon
Epidermolysis Bullosa Dystrophia (Congenital Traumatic Pemphigus)	vesicles, bullae, epidermal cysts, extensor surfaces and sites exposed to trauma with disabling scarring	bullae and ulcers of mucous membranes	carcinoma of mucous membranes, multiple basal and squamous cell carcinoma of skin*
Kaposi's Sarcoma (Multiple Idiopathic Hemorrhagic Sarcoma of Kaposi)	reddish, purplish, or bluish brown nodules, rubbery or firm consistency, often unilateral, predominantly on extremities along veins or lymphatics	lesions may occur in gastrointestinal tract or genitalia	sarcoma; high incidence of coexistent leukemia or lymphoma
Porphyria Cutanea Tarda	photosensitivity, bullae on areas exposed to trauma, hyperpigmentation, sclerodermatous thickening with calcification	systemic disease (may be similar to acute intermittent porphyria and precipitated by barbiturates)	basal cell carcinoma of skin, hepatoma*
Generalized Keratoacanthoma	red macules with rapid progression to papules and nodules; circular, firm, pearly, rolled, notched rim surrounding an umbilicated crater; may show exceedingly rapid involution	none	rare occurrences of squamous cell carcinoma*
Pachyonychia Congenita	thickening of the nails, subungal hyperkeratosis, keratoderma of the palms and soles	occasionally may encounter hyperhidrosis, abnormalities of hair, teeth, and bone development, bulla formation, and mental deficiency	carcinoma of mucous membranes
Syndrome of Bilateral Pheochromocytoma; Medullary Thyroid Carcinoma and Multiple Neuromas	true neuromas which may occur on the eyelids, lips, tongue or the nasal and laryngeal mucosae	parathyroid adenomas, hypertension secondary to pheochromocytoma	pheochromocytoma (often bilateral) medullary thyroid carcinoma

*—Rare, but nevertheless definite, cancer association.

skin. These cancers also appear at an *early* age (mean age 15). These characteristics of basal cell cancer differ significantly from that of the usual picture seen in the general population wherein basal cell cancer occurs in older adults and is often restricted to the upper portions of the face. Other cutaneous anomalies in this syndrome include multiple epithelium-lined cysts, lipomas, and hypokeratinized areas of the palms, "palmar pits," and soles. Dental and osseous anomalies include defective dentition and jaw cysts which are microscopically similar to dentigerous or primordial cysts, bifid ribs, spina bifida occulta, scoliosis, cervical and thoracic vertebral fusion, and brachymetacarpalism; neurologic anomalies include medulloblastomas, dural calcification, bridging of the sella tursica, agenesis of corpus callosum, and mental retardation; ophthalmologic anomalies include hypertelorism, dystopia canthorum, congenital blindness and strabismus; a possible endocrinologic aberration is hyporesponsiveness to parathormone.[2]

Table 2

AUTOSOMAL RECESSIVE INHERITANCE

Disorder	Skin Manifestations	Manifestations of Other Systems	Predominant Cancers
Xeroderma Pigmentosum	dry, scaling, hyperpigmentation and freckling, hyperkeratosis, and telangiectasia, basal and squamous cell carcinoma	multi-system involvement	basal and squamous cell carcinoma of skin and malignant melanoma (3%)
Werner's Syndrome (Progeria of the Adult)	premature aging of the skin, scleroderma-like findings, loss of subcutaneous fat, greying of the hair, baldness	juvenile cataract, diabetes mellitus, hypogonadism, short stature, arteriosclerosis	sarcomas, meningiomas
Ataxia-Telangiectasia (Louis-Bar Syndrome)	oculocutaneous telangiectasia temporal and nasal area of conjunctivae, also of butterfly areas, ears, antecubital, popliteal, dorsum of hands and feet; telangiectasia are venous	cerebellar ataxia, mental and growth retardation, recurrent sinopulmonary infection; lymphopenia; deficiency in developing delayed hypersensitivity (gamma 1-A globulin defect)	acute leukemia and lymphoma
Bloom's Syndrome (Congenital Telangiectatic Erythema and stunted growth)	congenital telangiectatic erythema of face "butterfly distribution," photosensitivity; occasionally, cafe' au lait spots, ichthyosis, acanthosis nigricans, hypertrichosis and lichen pilaris	short stature, fine featured face, doliocephalic head	acute leukemia
Chediak-Higashi Syndrome	semi-albinism, hyperpigmentary response to sunlight, excessive sweating	hematologic (anomalous intracellular granulations); retinal albinism, photophobia, recurrent infections, lymphadenopathy, and neurologic manifestations	lymphoma
Albinism	partial or total absence of pigmentation of skin, hair, eyes ("pink eye"); premature aging of skin as noted by actinic chelitis, telangiectasia, keratosis, and cutaneous horns	several phenotypic varieties including impairment of vision, hearing, and mental retardation	basal and squamous cell carcinoma of skin
Fanconi's Aplastic Anemia	spotty or patchy brown pigmentation	pancytopenia, bone marrow hypoplasia, congenital abnormalities including hypoplasia of thumbs, absent radius	leukemia
Glioma-Polyposis Syndrome* (Turcot's Syndrome)	cafe' au lait spots	none	brain tumors, most commonly glioblastoma multiforme (one patient had medulloblastoma) and adenocarcinoma of colon secondary to polyposis coli

*—Condition restricted to siblings (males and females) in two unrelated families strongly suggesting autosomal recessive inheritance.

Table 3

SEX-LINKED RECESSIVE INHERITANCE

Disorder	Cutaneous Manifestation	Manifestations of Other Systems	Predominant Cancers
Aldich Syndrome (Wiskott-Aldrich Syndrome)	chronic eczema, erythroderma, petechiae, purpura, furuncles	thrombocytopenia, recurrent infections, pyoderma, purulent otitis media; death often due to overwhelming infections	leukemia, lymphoma
Bruton's agammaglobulinemia	Pyodermas, furunculosis, cellulitis, conjunctivitis	multiple recurrent infections; defect in formation of immunoglobulin-producing system	acute leukemia

The patient under consideration showed a positive family history with many close relatives affected with this syndrome. This point is worth emphasizing since the syndrome is *rare*, but nevertheless, when encountered in a family, the doctor will likely see *many* cases because of the hereditary aspects of the disease. An early diagnosis of skin cancer was made in several of the patient's younger relatives as a result of the awareness by physicians of the familial aspects of this disease. It is therefore, important to realize that in a syndrome such as this, knowledge of its presence in the family can lead to earlier diagnosis through observation of some of the many anomalous features which may be present in variable degrees of expression among the relatives. Thus, through knowledge of its presence in some relatives, cancer may be detected at an earlier stage in others. Certainly in the case of basal cell cancer, a better cosmetic result may be given. However, if the lesion should impinge upon vital structures, a life threatening situation may be averted by excision.

Important knowledge to be acquired from hereditary cancer in general and from this patient in particular, is the wide spectrum of anomalies which may be manifested in a particular genetic disorder. Thus, in the multiple nevoid basal cell carcinoma syndrome, we may find multi-system involvement with the occasional finding of a potentially fatal involvement, namely that of medulloblastoma.

In summary, we have called attention to a large number of genetic conditions, all of which have dermatologic manifestations and which are associated with cancer. Many of these are rare in the population but their presence in an individual family may pose an all too *frequent* problem to the family physician. Genetic counseling,[5, 6] coupled with sound diagnostic measures could result in improved cancer control.[7]

Tables 1 to 4 are reproduced with permission granted by the Medical Examination Publishing Company, Inc., (Lynch, H. T., Skin, Malignant Neoplasms and Heredity, in press).

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Table 4

POSSIBLE GENETIC ETIOLOGY — MODE OF INHERITANCE UNKNOWN

Disorder	**Cutaneous Manifestations**	**Systemic Manifestations**	**Predominant Cancer**
Scleroderma	"stiffness of skin" with loss of lines of normal facial expression, history of Raynaud's phenomenon	esophageal involvement with decreased peristalsis, dilatation, dysphagia, alteration of pulmonary function	bronchiolar carcinoma, malignant carcinoid
Dermatomyositis	inflammatory changes of skin and muscle, erythema, puffy edematous swelling of eyelids "heliotrope bloating" minute telangiectasia	serum enzyme and electromyographic changes; may be preceded by Raynaud's phenomenon	adenocarcinoma of viscera
Sjogren's Syndrome (keratoconjunctivitis sicca)	dryness of skin and mucous membranes, hyperpigmentation, cafe' au lait spots, purpura and telangiectasia of lips and fingertips	rheumatoid arthritis	lymphoma
Systemic lupus erythematosus	malar erythema of "butterfly area," macules; variety of cutaneous vascular changes	intermittent fever, arthritis, arthralgia, arteritis, phlebitis, CNS and renal disease (lupus nephritis) biologic false-positive serology, positive LE preps	thymic tumors, leukemia and lymphoma
Giant pigmented nevi* (bathing trunk nevi)	nevi covering extensive cutaneous surface: variable manifestations ranging from flat to angiomatous, verrucous, and hairy nevi	none	melanomas in children
Nevus Sebaceous of Jadassohn	hamartoma often present at birth primarily on scalp, face or neck. Several centimeters or more, circumscribed, round on irregular, slightly raised, waxy, hairless which at puberty, becomes verrucous and nodular and later may be complicated by benign or malignant nevoid tumors	variable, may find convulsive disorder, focal EEG abnormalities, mental deficiency and brain dysplasia; occular abnormalities have included colobomas of the irides and choroid, conjunctival lipodermoids, and nystagmus	basal cell epithelioma (15% to 20%), sebaceous epithelioma, salivary gland adenocarcinoma, syringocystadenoma papilliferum (apocrine duct stage differentiation), and keratoacanthoma

*—Hereditary etiology has not yet been established, but the congenital basis and known hereditary factors of certain melanomas raise suspicion about genetic etiology.

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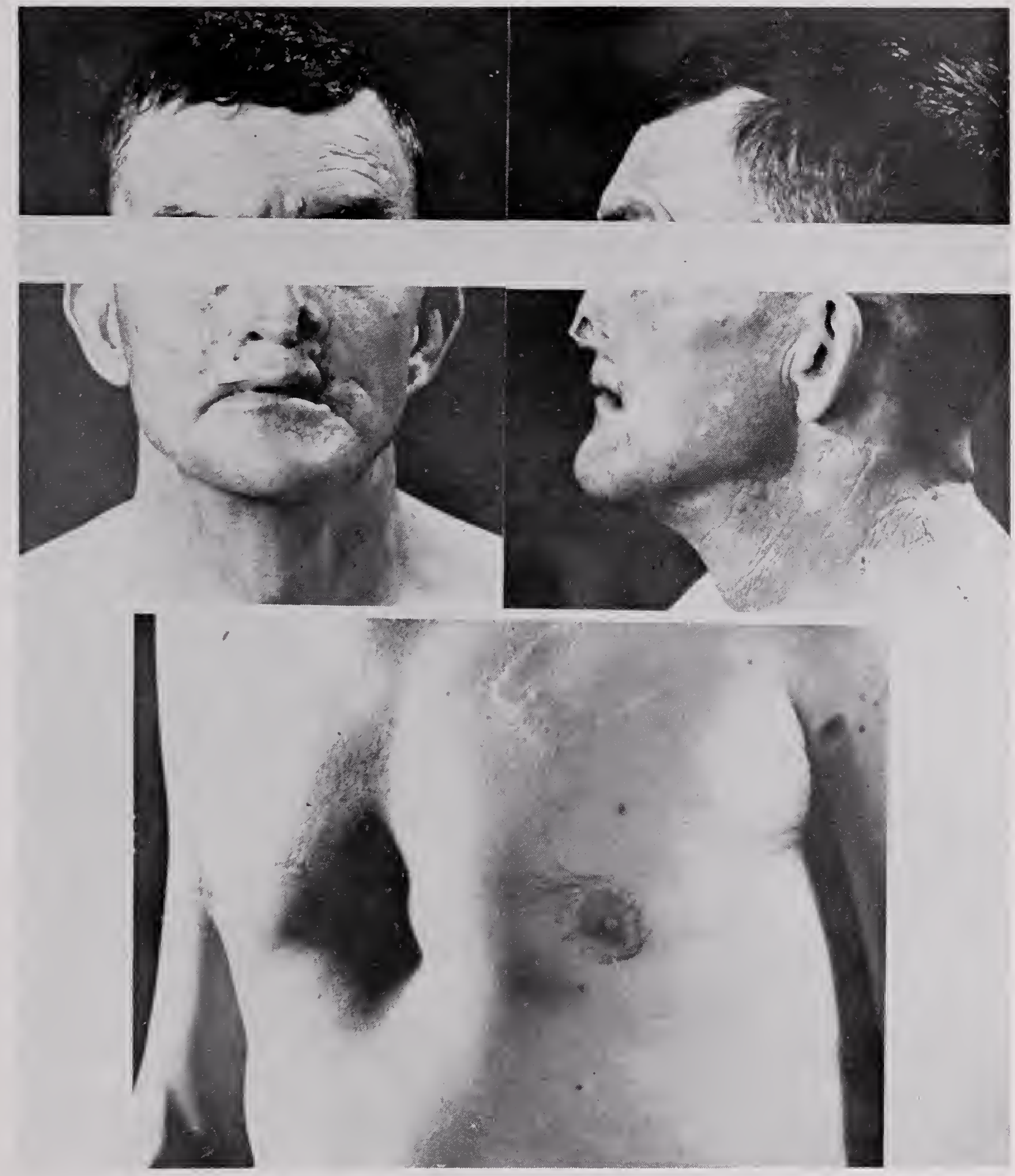

Figure 2. A 46-year-old white male with the multiple nevoid basal cell carcinoma syndrome. Note the numerous lesions and surgical scars over the entire face from excisions of multiple basal cell carcinomas. Hypertelorism was very prominent and there was a left lateral strabismus. Note also the prognathism on the lateral view and the prominent pectus excavatum of the chest.

Use of Unilateral Carotid Artery Compression as Means of Detecting Potential Stroke Patients

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Part I

Background of Study

This author, while an intern, has observed outstanding results from carotid endarterectomy. Since that time it has become frustrating to have to treat a patient with a so-called "stroke" when that individual had been getting along nicely and then suddenly have a stroke and become totally incapacitated for a lifetime. It is likely that approximately 40% of these people did not have to have a stroke, that it could have been prevented, because approximately 40% of these cerebrovascular accidents are a result of extracranial arterial occlusion and therefore amenable to surgical treatment and thereby prevention of an essentially untreatable disease. As stated by Cooley, et al., it is reasonable to assume that this incidence would be higher in cases representing an earlier course of the disease, and that the greatest opportunity for restoration of circulation occurs early when the lesion is segmental in nature.[1] It then became apparent that since the treatment of stroke disease is basically no different now from what it was approximately 50 years ago, that the only approach would be the same that would be taken in infectious disease involving viruses, and that is a preventive approach, because once the irreversible cerebral infarct is established, we are at a loss to offer the patient anything other than symptomatic treatment. Therefore we must, in some way, prevent this large number of cerebrovascular accidents that can be prevented, and it is estimated at this time that there are approximately 200,000 strokes in this country every year. Forty percent of these can be prevented and should be. This author undertook to attempt to identify patients who might have extracranial arterial occlusion prior to the onset of any symptomatology so that their disease could be prevented before frank symptomatology had occurred. Since this extracranial arterial occlusion is of such insidious and gradual onset, then the narrowing that has occurred in the extracranial vessels might be recognized in the absence of any symptoms by putting a stress on the cerebral function through compression of the carotid arteries, first one side and then the other, and that if any early narrowing of the vessels were present, then possibly cerebral ischemia could be produced and thereby isolate the individual for further evaluation by either carotid arteriography or retrograde arch studies. Notations in the literature are made with reference to the fact that once an arterial lesion is suspected by history or physical findings, it becomes obligatory to determine the presence and extent by arteriography.[4] However, this attitude, which is present throughout the literature, apparently fails to take into account that one might possibly discover this disease prior to any suspicion having been aroused by history or physical findings.

A vigorous search has been conducted throughout the literature and correspondence has been undertaken with several authorities, in order to determine whether or not routine carotid artery compression has been done on a normal population as part of their annual physical or check-up to attempt to isolate people with early arterial obstruction. Therefore, there is no reference material available for inclusion in this type of study.

Clinical Material and Methodology

From Jan. 1, 1967 to July 1, 1970, unilateral carotid compression, along with simultaneous palpation of the radial pulse on the same side, was carried out first one side and then the other on every consecutive physical examination, either routine annual physical, or so-called check-ups, or new patients who came in with a complaint having no reference to cerebrovascular disease, on patients age 50 and above. The age limit of 50 years was arbitrary; most of those individuals suffering from cerebrovascular accidents fall in the category above this age. These accidents do occur in younger age groups. However, since the pathogenesis of atherosclerosis is such that it requires some time for the disease to begin showing symptoms, it was necessary to have some arbitrary line of demarcation and this particular age was chosen. A total of 457 such patients were examined, and of this number, 70 were considered to have a positive response to carotid artery compression and indicated a need for further evaluation by arteriography. Positive response (that is a response that was indicative to the author that further evaluation by arteriography was necessary) was one which resulted in any or all of the symptoms noted in Table VI after five second compression of first one carotid artery and then the other with a three minute lapse between sides.

After obtaining a history on all of these patients, of these 70 who were referred for arteriography because of their positive response to carotid compression, there were 11 of these patients who did have one or more episodes each of what could be interpreted as transient cerebral ischemia (or TCI, TIA). These patients, having complaints with references to these episodes during history taking, considered them nothing more than just being a little lightheaded or getting a little too hot, or some other type of excuse, which may well have been the case. The point at which the carotid artery was compressed was uniform in all patients, being careful to avoid the carotid sinus area, and the compression was carried out well below the bifurcation, two fingerbreadths above the inner end of the clavicle. Care was also taken not to massage the area and to pinpoint compression of the artery itself and to avoid the vagus nerve.

Pathology and Pathophysiology

The underlying etiological factor in all of these cases was atherosclerosis, and multiple lesions were frequent. The disease in general assumes two patterns of involvement; namely a proximal and a distal form similar to those observed in patients with arterial insufficiency of the lower extremities. In the proximal form, usually the occlusion is located in either one, two or all of the great vessels arising from the aortic arch. However, this was not the case in this particular study because all of those in this study were located in either the common carotid, the bifurcation of the internal and external carotids or in the vertebrals or in the subclavian as noted in the subclavian steal syndrome. In the distal form of the disease, the occlusive lesion usually occurs near the origin of the internal carotid or the vertebral arteries and may be incomplete or complete. In contrast to the proximal form of the disease, however, the occurrence of complete obstruction in the distal form is rarely well localized and usually extends well into the intracranial portions of the vessels and that was the case in a significant number of those reported in this series. These are the cases which usually represented a more advanced form of the disease on which thrombosis had supervened on a partially occlusive process. Because of this, most cases of this type were found to be inoperable and again it is noted that it behooves one to identify these lesions before they reach this stage of development.

The question which came to mind was this: how long could one occlude a carotid artery in a normal individual and not produce any symptoms of cerebral ischemia? Observations were taken on office personnel and the author to determine how long it would take to produce cerebral ischemia. In the individuals tested, including children and adults, the carotid artery could remain compressed for up to 15 seconds without any significant change in the individual's status. Therefore, an arbitrary time of 5 seconds was established, and if an individual developed ischemic symptoms within that period, it was felt that he might have a contralateral occlusive process, and he was referred for arteriography. The literature is replete with references to cerebral collateral circulation and cerebral ischemia, one of the more interesting studies was done by Meyer, Fang, and Denny-Brown.[6] Using the technique of electropolarography in monkeys, they were able to determine that in spite of the extreme vascularity of the cerebral cortex, there is but a very narrow margin of oxygen reserve and this reserve will support cortical neuronal function for some 10 to 15 seconds by correlation of the EEG with electropolarography following nitrogen and vascular occlusion. They also noted that apart from its striking dependence on the level of systolic blood pressure, tissue oxygen availability in the cerebral cortex shows remarkable compensation to the effect of occlusion of a blood vessel. When a large blood vessel was occluded, such as the carotid or middle cerebral, there was a delay of 10 to 30 seconds before the bordering areas reflected a similar rise in oxygen potential which nevertheless assumed large proportions and outlasted the period of occlusion, and this reaction was found to be related to vasodilatation of the smaller collateral vessels and was independent of the presence or absence of sympathetic or parasympathetic innervation, but was abolished by inhibition of tissue oxidation by cyanide. It was therefore assumed to be the result of local vasodilatation of collateral small vessels by tissue metabolites originating in the ischemic area. This compensatory process was also very sensitive to the level of systolic blood pressure and was found to be absent when the blood pressure was below 60 mm Hg and was greatly improved by a rise in blood pressure. The occlusion of the carotid artery resulted in a slight rise in systolic blood pressure and was immediately reflected by a rise in potentials in the opposite hemisphere and in the ipsolateral occipital pole. I think this is relevant to our practice because we know of people who have carotid lesions who have either complete or partial carotid occlusions, and that if their blood pressure is dropped below a critical point, they may develop irreversible changes. For this reason, Young, Humphries, et al did a series of cases on people who were apparently asymptomatic. They performed a series of carotid endarterectomies on people who were either asymptomatic or who had had transient cerebral ischemia, and the purpose was that they were about to undergo major surgery and it was felt that the carotid lesion should be taken care of first because a fall in blood pressure associated with a general surgical procedure might throw them into a stroke.[9] This relates to the study by Meyer, Fang and Denny-Brown.[6] The sites of the lesion noted on those patients undergoing surgery for cerebrovascular disease are found in Table I. The distribution by age and sex of the 70 patients undergoing arteriography is found in Table II. The distribution of the 41 patients undergoing arterial surgery by age and sex is found in Table III. The distribution by age and sex of the 63 patients in whom arterial disease was found by arteriography is found in Table IV.

Table I

Location of Lesion	Total	%	Right	Left
Carotid bifurcation adjacent to or in origin of internal carotid	32	56	15	17
Internal carotid artery	11	20	7	4
Subclavian artery	4	7	0	4
Common carotid artery	10	17.5	4	6

Table II

Distribution of 70 patients undergoing arteriography by age and sex.

Age Group	Men Number	%	Women Number	%
50-55	4	5.7	2	2.9
56-60	5	7.1	1	1.4
61-65	4	5.7	2	2.9
66-70	6	8.6	7	10.0
71-75	12	17.1	5	7.1
76-80	5	7.1	9	13.8
81-85	1	1.4	5	7.1
86-90	1	1.4	1	1.4
	38	54.1	32	45.8

Table III

Distribution of 41 patients having arterial surgery by age and sex.

Age Group	Men Number	%	Women Number	%
50-55	2	4.8	1	2.4
56-60	0	0	1	2.4
61-65	1	2.4	2	4.8
66-70	4	9.7	6	14.5
71-75	7	17.5	4	9.7
76-80	3	7.3	6	14.5
81-85	1	2.4	2	4.8
86-90	1	2.4	0	0
	19	46.5	22	53.1

Of the 41 patients undergoing surgery for carotid arterial disease, only 5 demonstrated a bruit on physical examination. Four patients were identified as having a subclavian steal Syndrome by having reduction or absence of radial pulse by carotid artery compression on the ipsilateral side. A significant blood pressure difference in the two arms was noted in these 4 patients, and also a difference in the sphygmoscillometry. A diminished carotid pulse was noted in only 7 of the 41 patients who underwent surgery for their arterial occlusive disease. The effect of unilateral carotid compression in these 70 patients who were referred for arteriography was dizziness, syncope, headache, seizures, confusion, blurred vision, speech difficulty, or parasthesia. However, 3 of the patients became unconscious, and in one of the three, the unconsciousness was followed by a short period of seizure activity. The remaining 67 related only to those already stated with the exception of seizure activity.

Table IV

Distribution of 63 patients in whom significant arterial disease found by arteriography by age and sex.

Age Group	Men Number	Men %	Women Number	Women %
50-55	2	3.2	1	1.6
56-60	3	4.8	1	1.6
61-65	3	4.8	2	3.2
66-70	6	9.5	7	11.1
71-75	12	19.0	5	8.0
76-80	5	8.0	8	12.7
81-85	1	1.6	5	8.0
86-90	1	1.6	1	1.6

Clinical Manifestations - Lack Of

There were obviously no clinical manifestations opthalmodynamometry was not performed) in any of these patients since all of these people underwent arteriography because of their response to carotid artery compression and not because of any symptomatology which may have brought them to the physician.

Medical Education

PRESIDENT'S PAGE

During the past few years, medical education has been a prominent subject of discussion, not only for physicians, but also for the lay press, state and national legislators, chambers of commerce, etc. Though the Nebraska State Medical Association has no formal stated position on many aspects of medical education, I believe such a white paper would be useful as well as instructive. Perhaps this President's Page can serve as a starting point for crystallizing our thinking on the subject.

The need for some clear statement on medical education in Nebraska is illustrated by the diverse philosophies of the members of the American Association of Medical Colleges. Some medical schools for instance believe the awarding of an M.D. degree should only indicate exposure to a central core of medical knowledge. This philosophy is coupled with the premise that additional years of study in some specialty would precede practice involving patient care. Other schools are at best experimenting with a shortened curriculum (usually three years). Many schools have retained the concept that awarding the M.D. degree should not only indicate assimilation of basic medical knowledge but also some expertise in patient care.

Our need for consideration of what is currently going on in medical education is also illustrated by the flurry of national and state legislative proposals affecting the medical schools. On the national scene, we have seen a reduction of available research funds, grants based on the number of graduates rather than the number of students, student loans, and increased emphasis on nation wide licensure examinations (FLEX). In the last session of the Nebraska Legislature, several proposals were made relative to medical education, including loans to students, curriculum committee composition, admission standards, and a requirement to practice within the state. In the State Legislature, some related proposals were considered which also illustrate the close correlation with medical manpower problems (physician's assistants, licensing technicians, etc.).

Anyone, senator, congressman, state senator, or physician making proposals in the field of medical education should begin with the Flexner Report of 1910 and be aware of the changes since then. Particularly during the past 15 years, there have been many changes, i.e. preceptorships, elective courses, clinical exposure during the freshman year, etc. The past 15 years have also seen changes brought about by legislation such as Medicare and Medicaid, changes brought about by advanced technology and pharmacology, and changes brought about by altered social standards and expectations. A good discussion of most of these problems as well as some current proposals for their solution is contained in Report C of the Council of Medical Education received at the AMA meeting last month.

While sketching some background and pointing at some problems, I feel I should indicate some of my own positive points. First of all in Nebraska we must realize we have two medical schools, both of which have done a commendable job in providing our state with excellent practitioners as well as providing adequate research. Though the legislature is only directly concerned with the University of Nebraska, Creighton, a private school, treats our citizens, educates some of our young people in the health professions (including 1/3 of our practicing physicians), and must compete in the same market for personnel.

Premedical requirements, though probably not as important as in the past, should be retained. In order to understand and communicate with our patients, we need more than biological science in our education. An important associated point is that medicine is still an art, not all science. I feel the majority of any medical school selection committees should be educator-physicians with practicing physicians represented. Some states have rotated the practicing physicians yearly, but to me this seems to defeat the purpose, since experience in this type of selection would be vital to success.

Medical school curriculum can be shortened from the traditional four years, but probably only at the expense of vacation time, for while our teaching methods are making good progress the body of medical knowledge is increasing even faster. Increased elective time has shown itself to be beneficial in directing the student into his chosen area of practice and should be continued. In general, I think the association with private practitioners should probably be increased since most people still prefer to be treated in other than an institutional setting. Certainly the preceptorship programs around the country have been well accepted and helped stress the importance of family practice.

Loan programs for medical and allied health students must be continued. Certainly such programs as the Nebraska Medical Foundation, AMA-ERF, and other private sources have already provided much available manpower that otherwise could never have been a reality. The interest of state and federal government in student loans is commendable and should be encouraged as long as the student and school are both free of associated commitments.

Time and space prevent anything other than cursory mention of federal as opposed to state licensure, suggested and/or required continuing education, tuition charges as opposed to teaching costs, clinical material as limiting factors in the size of medical school classes, and residency requirements. Each of these factors, however, along with the preceding, deserve careful thought and consideration and should be formulated into a policy statement for the Nebraska State Medical Association. While such a statement would probably require review from time to time it would still be a useful tool.

Roger D. Mason, M.D.
President, Nebraska State
Medical Association

WashingtoNotes

The IRS

An Internal Revenue Service survey of 8,400 health care providers who participated during 1968 in medicare and medicaid, including physicians and dentists, revealed that 83 percent reported their receipts correctly.

Fifteen percent of all taxpayers in the study under-reported receipts by an average of $7,700, according to the IRS, and two percent over-reported, by an average of $16,000.

The survey was based in the main on providers of care who as individuals received $25,000 or more from federal programs.

M & M

The House Ways and Means Committee has approved the Social Security Amendments of 1971 (medicare and medicaid changes) and sent the massive health bill to the floor of the House for expected early passage.

As adopted by the committee, the bill concerns itself with the implementation of the Administration's Health Maintenance Organization option for medicare beneficiaries, restricts physicians' fee increases under federal programs, reduces some long-term medicare benefits, and covers under Medicare for the first time disabled social security beneficiaries.

Medicare beneficiaries would be permitted to have all covered care provided by a Health Maintenance Organization (HMO), defined as a prepaid group health or other capitation plan, with the government reimbursing the HMO's at 95 percent of the average cost of medicare beneficiaries in the area.

Physicians' medicare fees would be pegged at the 75th percentile of actual charges in a locality and future increases would be tied to a special index reflecting rising costs. The Department of Health, Education and Welfare could terminate payments to providers found guilty of program abuses.

A medicare coinsurance factor one eighth of the hospital deductible would be applied after the 30th day. The medicare part B deductible would rise to $60 a year and medically indigent persons above the poverty level could be required by the states to pay an income-related premium.

Other features of the proposed legislation:

—HEW would be required to develop experiments and demonstration projects designed to test payment to providers of services on a prospective basis under the medicare, medicaid, and maternal, and child health programs.

—Limits on institutional provider costs to be recognized as reasonable under medicare could be imposed based on comparisons of the costs of covered services by various classes of providers in the same geographical area.

—Medicare would pay for the services of teaching physicians on the basis of reasonable costs, rather than fee-for-service charges, unless a bona fide private patient relationship had been established or the hospital had, in the 2-year period ending in 1967, and subsequently customarily charged all patients and collected from at least 50 percent of patients on a fee-for-service basis. Medicare payments could also be authorized on a cost basis for services provided to hospitals by the staff of certain medical schools.

—HEW would be authorized to establish minimum periods of time (by medical condition) after hospitalization during which a patient would be presumed, for payment purposes, to require extended care level of services in an extended care facility. The attending physician would certify to the condition and related need for the services. A similar provision would apply to post-hospital home health services.

—Present penalty provisions relating to the making by providers of care of a false statement or representation of a material fact in any application for medicare payments would be broadened to include the soliciting, offering, or acceptance of kickbacks or bribes, including the rebating of a portion of a fee or a charge for a patient referral. The penalty for such acts, as well as the acts currently subject to penalty under medicare, would be imprisonment up to one year, a fine of $10,000, or both. Similar penalty provisions would apply under medicaid.

—HEW would conduct a two-year study of the desirability of covering chiropractors' services under medicare.

Pep pills

The Justice Department has cracked down on the widespread abuse of "pep pills" by proposing the reclassification of amphetamines and methamphetamines so as to require that they fall in the category of nonrefillable prescriptions.

Personnel shortage

The House Committee on Interstate and Foreign Commerce has approved a three-part health bill designed to meet the national shortage of medical personnel by 1978.

The proposed legislation would authorize an estimated $3.3 billion in aid to health profession students and their schools in the next three years and provide the facilities and programs to close the manpower shortages in the health professions within seven years.

Help the students

The nation's financially beleaguered medical schools would receive $11,500 for the full-term cost of training each student, an action long urged by the American Medical Association.

Under the legislation, expected to pass the house in substantially the same form, each school would receive $2,500 per student per year for the first three years of training. The grant rises to $4,000 for the final year. In order to encourage swifter training, three-year schools would receive the same total as four-year schools, but the final year figure would be $6,500.

Cancer research

President Nixon recently signed into law a $6.9 billion supplemental appropriation bill containing an additional $100 million for cancer research. The "cancer cure" program would have an independently budgeted research unit within the National Institute of Health with a director reporting directly to the President.

Down Memory Lane

1. Food and the metabolism of food plays an important part in producing eczema in infants and children.

2. We have found, in our brief experience of two years, that the dry milk is much more easily handled than the modified cow's milk and this is especially true in the younger infants.

3. After General Pershing had set a precedent for wearing the Sam Browne belt and after we learned how to carry gloves and canes, we were more readily recognized as proper officers by members of the British military establishment.

4. Mrs. B., age 34, heptipara, well preserved.

5. The expression "summer diarrhea" has come to include a number of clinical entities, namely, simple diarrhea, acute indigestion, lienteric diarrhea, enterocolitis, dysentery, and cholera infantum.

6. Poor ventilation very often explains a child's backwardness, ill health and often a stunted intellect.

7. By injecting the peritoneal cavity with hydrogen we are able to radiograph the viscera of the pelvis as well as those of the upper abdomen.

8. The Sidney General Hospital after a short, and presumably meteoric career has been transformed into a rooming house.

9. Having so well cleaned up the quagmire of undergraduate medical education, the Council on Medical Education is now attacking the problems of hospital standardization, and postgraduate medical education, in order to justify the perpetuation of its machinery.

10. With heated soldering irons in readiness, I prepared to attack the cervical growth.

11. Smallpox has been prevalent throughout the state during the past year.

Nebraska State Medical Journal
July, 1921

Rapid Re-expansion of Pneumothorax — R. L. Humphreys and A. S. Berne (Upstate Medical Center, Syracuse, NY 13210). Radiology 96:509-512 (Sept) 1970.

Two instances of unilateral pulmonary edema occurring as the result of rapid re-expansion of pneumothorax are described and illustrated. This type of pulmonary edema is preventable by gradual expansion of the lung collapsed by pneumothorax. If edema should occur, however, it resolves in five or six days without permanent sequelae.

Probability of Women With Advanced Breast Cancer Responding to Adrenalectomy or hypophysectomy — G. Sarfaty (Cancer Institute, Melbourne), and M. Tallis. Lancet 2:685-686 (Oct 3) 1970.

Data on urinary steroids in women with breast cancer were used to produce probability curves allowing the chance of success with adrenalectomy or hypophysectomy to be computed for individual patients. Graphs were drawn for probability of success against size of discriminant (11-deoxy-17-ketosteroids + 17-hydroxy-corticosteroids) in 164 cases of breast cancer. In older patients this approach could be made more useful by substituting time to ablation for 17-hydroxycorticosteroids. This probability method may provide the clinician with a useful tool in assessing an individual patient's likely response to endocrine surgery.

Preliminary Experience With Total Nodal Irradiation in Hodgkin's Disease — R. E. Johnson et al (National Cancer Institute, Bethesda, Md 20014). Radiology 93:603-608 (Sept) 1970.

Total nodal irradiation (TNI) of all major lymph node areas was evaluated in 163 consecutive previously untreated patients with Hodgkin's disease and compared to extended field therapy in stages I and II. The decreased relapse rate following TNI is reflected in improved survival rates. TNI has also been effective for stage III-A, but less satisfactory for stage III-B. Extension of disease to extranodal sites has correlated with clinical staging and histopathology, defining certain groups as especially suitable for adjuvant chemotherapy.

Therapy of Female Gonorrhea With Cephaloridine — L. H. Shapiro and J. W. Lentz (Venereal Disease Control Section, Dept of Public Health, Philadelphia 19104). Amer J Obstet Gynec 108:471-473 (Oct 1) 1970.

An alternate antibiotic in the treatment of gonorrhea in women has been evaluated in the social health clinics of the Philadelphia Health Department. A single intramuscular injection of 2 gm of cephaloridine gave a therapeutic success rate of 94.3% (208 patients) without local or systemic reactions. Thayer-Martin selective culture media and delayed fluorescent antibody technique are equally effective for pretreatment diagnosis of gonorrhea in female patients. Delayed fluorescent antibody technique is too sensitive for the posttreatment evaluation of patients. Rectal cultures made no substantial increase in the yield of positive cultures obtained from the cervix or endocervix.

Our Medical Schools

Family planning

University Regents May 8 accepted a contract for the Medical Center to consult with outstate physicians and educate their patients on family planning.

Dr. Warren Pearse, chairman of the department of obstetrics and gynecology, said that in order to determine how best to provide this service the Medical Center will conduct several pilot projects in outstate communities. One such program could be in operation within a month, he said. The Medical Center is still in the initial stage of discussion with several outstate communities and physicians about operation of the program. In addition, a group of some 25 people, representing all segments of health care, including consumers, has been meeting as an advisory group to the program.

Grant to Creighton

Creighton University has received a $9,650 grant from the U.S. Public Health Service to conduct a Health Agency Management training program. Co-sponsored by the Nebraska Inter-Agency Health Planning Council, the Creighton University School of Medicine and the Creighton Management Education Center, the program is scheduled for July 11 through 16.

Coordinating the program is William W. Wood, associate coordinator for Regional Medical Programs at the Creighton Medical School.

Management techniques best suited for use in health agencies will be examined in the week-long program. Topics include Management by Objectives, People Management, Planning Principles and Techniques and other management related subjects. Approximately 35 students are expected to enroll in the course.

Dr. Ebadi named

Dr. Manuchair Ebadi May 8 was named by the University of Nebraska Regents chairman of the department of pharmacology at the Medical Center. Dr. Ebadi has been acting chairman of the department since June, 1970.

Dr. Ebadi joined the Medical Center faculty in 1967 as an assistant professor and was promoted to associate professor in 1969.

He received his doctor of philosophy degree in pharmacology from the University of Missouri School of Medicine in 1966 and his master of science degree in pharmacology from the University of Missouri in Kansas City in 1962. He earned his bachelor's degree in chemistry at Park College, Parkville, Missouri, in 1960.

In September, 1969, Dr. Ebadi took a year's leave of absence from the Medical Center to accept an International Visiting Professorial Fellowship at the National Institutes of Health in Washington, D.C. He was the first Iranian to hold such a fellowship.

Creighton awards

Jeffrey R. Vinton received the International College of Dentists Award at Creighton University's Dental Awards Banquet held May 19 at the Hilton Hotel. The highest student award was presented to Vinton for outstanding achievement, leadership, and professional growth and development. He is a senior in the School of Dentistry and a resident of Omaha.

Other awards to seniors included the Ak-Sar-Ben Study Club Award to Dale R. Rueping, Lamesa, Cal.; Alpha Omega Award for highest four-year scholastic average to Donald R. Rozema, Omaha; The Gold Foil Award to John E. Roussalis, Casper, Wyo.; American Academy of Oral Medicine Award to Donald R. Rozema; American Academy of Dental Radiology Certificate to Roger K. Eichman, Juneau, Alaska; American Academy of Periodontology Award to Richard M. Tempero, Omaha; American Association of Endodontists Certificate to Todd E. Lee, Hollywood, Cal.; American Dental Society Anesthesiology Certificate to Jeffrey R. Vinton; American Society of Dentistry for Children Award to Paul B. Richards, Fresno, Cal.; Block Drug Co. Award to Joseph J. Hurd, Perry, Ia.; Delta Sigma Delta Award to Harvey H. Duryee, Litterock, Cal.; International College of Dentists Award, Jeffrey R. Vinton; C. V. Mosby Awards to James S. Herbert, Omaha; Lawrence J. Kelley, Omaha; Dale R. Ruemping, Louis V. Spicciati, Omaha, and Dennis L. Torney, Lodi, Cal.

Five senior Dental students were initiated into Omicron Kappa Upsilon, national honorary dental fraternity. They are Harvey H. Duryee, Vincent W. Mancuso, St. Petersburg, Fla.; Paul B. Richards, John E. Roussalis and Donald R. Rozema.

The Prosthetic Department Plaque went to Philip Quinley, Great Bend, Kan.; The Lessing A. Sattler Award to James R. Demman, Las Vegas, Nev.; State of Montana Award to Jack L. Ossello, Butte, Mont.; Table Clinic Contest Prizes to Daniel L. Whiting, Ft. Dodge, Ia.; Daniel P. Copps, Rapid City, S.D.; Roger K. Eichman and Joseph M. Simpson, Jr., Montgomery, Ala.; the Dr. Charles E. Woodbury Award and Xi Psi Phi membership to John R. Roussalis.

Over 400 students and faculty attended the banquet which is held annually. The wives of dental students were presented with D.D.S. certificates: "Devoted Dental Spouses."

Coming Meetings

CRIPPLED CHILDREN'S CLINIC —
July 10 — Chadron, Elks Lodge
July 31 — Fairbury, Elks Lodge
August 7 — Ord, Elks Lodge
August 14 — Scottsbluff, St. Mary's Hospital
August 28 — Cozad, Elks Lodge

AMERICAN ASSOCIATION OF MEDICAL CLINICS — North Central Regional Meeting; July 17, 1971; Holiday Inn, La Crosse, Wisconsin. Write to Edward M. Wurzel, M.D., Executive Director, P. O. Box 949, 719 Prince Street, Alexandria, Virginia 22313.

AMA COUNCIL ON OCCUPATIONAL HEALTH — 31st Annual Congress at Jackson Lake Lodge in Grand Teton Park, Wyoming, August 29-30, 1971.

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

AMERICAN ACADEMY OF OPHTHALMOLOGY & OTOLARYNGOLOGY — Annual Meeting at the Convention Center in Las Vegas, Nevada, September 20-24, 1971. For details, write to: C. M. Kos, M.D., 15 Second St. SW, Rochester, Minn. 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY — Postgraduate Course, October 4 through 9, 1971 at the University of Illinois Hospital Eye and Ear Infirmary. Write to Department of Otolaryngology, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE — 22nd Annual Session; October 11-15, 1971; Americana Hotel, New York City. Address of

AALAS is: 4 East Clinton St., P.O. Box 10, Joliet, Ill. 60434.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting; House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY — October 23 through 29, 1971; in U. of Illinois Eye and Ear Infirmary. Write to: Otolaryngology, P.O. Box 6998, Chicago, Illinois 60680.

OMAHA MID-WEST CLINICAL SOCIETY —39th Annual Postgraduate Assembly; November 1, 2 and 3, 1971; Omaha Hilton Hotel. The Society's address is 1040 Medical Arts Bldg., Omaha 68102.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City. NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28 - December 1, 1971.

Welcome New Members

Ethel Brown, M.D.
3305 Armbrust Drive
Omaha, Nebraska 68124

Joseph A. Jarzobski, M.D.
7500 Mercy Road
Omaha, Nebraska 68124

Irving B. Margolis, M.D.
2305 South 10th Street
Omaha, Nebraska 68108

Syed M. Mohiuddin, M.D.
2305 South 10th Street
Omaha, Nebraska 68108

James J. Woodbury, M.D.
2305 South 10th Street
Omaha, Nebraska 68108

The Law

Hearings on federal employees health insurance

The Senate Committee on Post Office and Civil Service held hearings on S. 1424, to amend the Federal Employees Health Insurance Program to include a new program to be administered by the Civil Service Commission. Benefits would be expanded and paid for directly by the Civil Service Commission to hospitals, nursing homes, physicians, and other providers. Payments would be made at reasonable cost according to fee schedules set by the Civil Service Commission. The only witness to appear before the Committee was Andrew E. Ruddock, Director of the Bureau of Retirement, Insurance, and Occupational Health, of the Civil Service Commission, who estimated that the present federal employees health insurance program costs the government about $475 million a year. Under the new plan, he estimated, this cost would rise to $2.5 billion by 1974, an outlay which he regarded as prohibitive.

Senate debate on military service

The Senate has begun debate on H.R. 6531, extending the Military Selective Service Act of 1967. This bill provides a 2-year extension of present draft authority, as well as a 2-year extension of the authority of the Selective Service to make special calls for physicians, dentists, and allied health specialists. Under the House version, the President would have discretionary authority to end undergraduate student deferments. The administration has announced an intention to withdraw such deferments from all who received them after April 23, 1970.

The New Senate bill would not permit deferments to be withdrawn from the freshman class now in college.

Administration's cancer program

Senator Dominick (R) Colo. has introduced S. 1828, the Administration's bill to conquer cancer, to improve and coordinate research and development programs and activities relating to the prevention, diagnosis, or treatment of cancer. The program would be placed in the National Institutes of Health, but would have an independent budgetary status, and the director of the program would be directly responsible to the President.

The Senate Health Subcommittee, which was to meet in executive session to report out S. 34, the Conquest of Cancer Act, has postponed further consideration of cancer research legislation until hearings can be held on the President's bill in June. S. 34 would establish a separate cancer authority outside the NIH.

In a related measure, the House passed, by voice vote, H.R. 8190, which provides supplemental appropriations for fiscal 1971. Included in the supplemental appropriations are $100 million for cancer research, which originally was not to be made available until fiscal 1972, and $8 million for medical care for veterans. During deliberations on this bill, the House rejected amendments to provide $10 million to combat alcoholism, and $25 million to support programs for training in the family practice of medicine. The latter would have tested the validity of the Presidential veto of the family practice bill in the last Congress.

Health manpower bills

Representative Rogers (D) Fla. has introduced H.R. 8629, for a three-year extension of the Health Manpower Act. The bill, cosponsored by all but one of the House Subcommittee of Public Health and Environment, now goes to the full House Interstate and Foreign Commerce Committee for further action.

A total of $2.75 billion is provided for institutional grants to the health professions schools. Institutional support for schools of medicine, osteopathy, and dentistry would be provided at a rate of $2500 a year for each student for three years of the curriculum, and $4000 for each graduate. An additional $1000 would be provided for each first year student representing an increase over a mandatory enrollment increase. Support at a lesser figure would be provided for veterinary, optometry, pharmacy and podiatry schools.

Additional authorizations would provide $270 million for health manpower initiative awards to establish health education centers, and $412 million for special project grants for programs in family medicine, physician assistant training, and others. The bill continues support for scholarship and student loans at increased levels.

Also introduced for consideration by the full Committee is H.R. 8630, a three-year extension of the Nurse Training Act. Included are provisions for construction and special project grants, as well as institutional support grants and student loans and scholarships.

PRO bill introduced

The Peer Review Organization Act has been introduced in the Senate by Sen. Hansen (R) Wyo. (S. 1898). This bill, structurally like last year's PRO proposal, calls for agreements between state medical societies and the Secretary of HEW under which the state medical society, or organization designated by the state society, would establish a program of peer review. Matters for review would be reasonableness of charges, need for and quality of medical services under Medicare, Medicaid or other federal health care programs. Each state medical society would appoint a state Peer Review Organization Commission of five physicians and the Commission, in turn, would appoint local physician panels of three members.

A panel would consider and review information furnished by individuals, institutions, government agencies, and others, of abuses of the federal health care programs, or might itself initiate reviews. A panel might recommend but not impose disciplinary action against a provider. The PRO Commission would make the final determination, and would have authority to terminate payments for services performed by the provider under the federal health care programs.

Health manpower bills ordered reported

The House Interstate and Foreign Commerce Committee has ordered three health manpower bills to be reported. H.R. 8629, the Comprehensive Health Manpower Training Act of 1971, would extend and expand the Health Professions Educational Assistance Act which expires on June 30. H.R. 7736 would extend for one year the student loan and scholarship provisions for health professions students under that Act. This bill is intended to permit funds to be provided for students who are entering their first year of training in one of the health professions in the event the comprehensive extension of expiring legislation is not passed before the end of June. Also ordered reported by the Committee was H.R. 8630, a 3-year extension of the Nurse Training Act. The bills had been approved by the Health Subcommittee following hearings held in April. (See *Legislative Roundup*, May 21, 1971).

Cancer cure program

The Senate Health Subcommittee will hold hearings June 10 on the Administration's cancer cure program S. 1828. Under this program, cancer research functions would remain within the National Institutes of Health. The bill, entitled the Act to Conquer Cancer, provides that the program, acting in coordination with the other programs and activities of the National Institutes of Health, shall have as its objective the conquest of cancer at the earliest possible time.

Doctor Teal

Fritz Teal was born in Omaha, in 1904. He died May 9, 1971, in Marathon, Florida, at the age of 67. He received his M.D. from the University of Nebraska in 1929 and interned at Wesley Memorial Hospital and Shriners Hospital for Crippled Children, Chicago, in 1930.

He was Chief Surgeon of the Nebraska Orthopedic Hospital and Chief Surgeon of the Nebraska Crippled Children Services, Chief of the Orthopedic Sections at Lincoln General Hospital and Saint Elizabeth's Hospital, Attending Orthopedist at the Lincoln VA Hospital, and Chief of Staff at Lincoln General Hospital. He was Associate Professor of Orthopedic Surgery at the University of Nebraska and a Diplomate of the American Board of Orthopedic Surgery. He served in the US Army from 1942 to 1945 and held the rank of Major.

He was a member of the county and national societies, of the American Academy of Orthopedic Surgeons, and of the Association of Bone and Joint Surgeons.

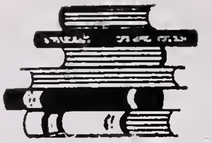
He was President of the Nebraska State Medical Association from 1960 to 1961.

He is survived by his wife Elinore, a son Frederick F. III, a daughter Gretchen, and a daughter Linda; and by thousands of persons who were the better for having been his patients.

He was an excellent surgeon, a fine teacher, and a gentleman. He will not soon be forgotten nor easily replaced. He was skilled, and kind, and he was easy to work with. He rendered a great deal of service to his community. He was a very good doctor.

—F.C.

Books



Review of Handbook on Obstetrics and Gynecology, Fourth Edition. Author: Ralph C. Benson, M.D., Professor of Obstetrics and Gynecology and Chairman Department of Obstetrics and Gynecology, University of Oregon Medical School Hospitals and Clinics, Portland, Oregon. Publisher: Lange Medical Publications, Los Altos, California. Price: $6.50.

This newly revised 4th edition consists of 744 pages. It is complete in its coverage of obstetrics and gynecology both from the standpoint of hospitals and office practice. Actually, in many instances it surpasses a handbook and becomes more of a textbook. It could well be included in the small collection of references usually seen on the antepartum and postpartum floors as well as on the gynecological wards. The attending Ob and Gyn staff should consider presenting this Handbook to each intern as he enters the Ob and Gyn service. It would be a valuable asset to the resident staff. It also has the virtue of being quite complete but yet not to the point that the nursing staff or other parimedical personnel could not easily comprehend most of the Handbook. There is one rather glaring shortcoming, and that is the chapter on abortion. Whether we accept it or not, the fact remains that this is a nation that is rapidly changing its traditional philosophy concerning abortions, as can be demonstrated by the great number of states that have within the past few years drastically changed their abortion laws, and also the various state supreme court decisions along with the United States supreme court decisions. Perhaps Dr. Benson has chosen to delay revision of this chapter until more experience can be gained from states now allowing abortion on demand, but this chapter must be revised in the not too distant future.

All in all, this is an excellent Handbook and should be in the library of all physicians. Even internists, general surgeons, anesthesiologists and others would find it valuable as a reference.

—R. E. Garlinghouse, M.D.

Medicinews

Communications program

Starting June 1, the AMA is launching a special communications program in three national magazines and selected local media. Part of the effort will focus on better personal health care. Part will provide information on organized medicine's response to various national health care issues.

Present media plans call for six to eight full-page insertions in *Life*, the *Reader's Digest* and *Ebony* during the remainder of 1971, possibly ten insertions in major newspapers plus very limited exposure on television in a few cities. The budget currently provides for the expenditure of $750,000 in 1971 and a similar amount in 1972.

Of the three messages now being released for publication one, with the headline "How to Kill Yourself," warns of the dangers of being overweight, while pointing out that "over 70% of the AMA's annual budget goes for health and scientific information."

A second, on the subject of ecology, indicates that disease aggravated by environmental factors adds $38 billion to the nation's health bill. The third, speaking more specifically to national health issues, talks about the AMA's student loan program. Since 1962 the AMA, through voluntary contributions by individual physicians, has guaranteed $48 million worth of loans and helped 20,000 medical students, interns and residents to become practicing physicians. It also points out, in discussing the doctor shortage, that "While overall population has expanded 12% since 1960, the U.S. physician population has grown 28%."

Reports of Officers, Delegates and Committees

(These reports appear as originally submitted. For the House of Delegates' deliberations, possible changes, and final action, refer to the minutes which follow these reports).

REPORT OF BOARD OF TRUSTEES

R. Russell Best, M.D., Omaha, Chairman; Carl Frank, M.D., Scottsbluff; H. V. Nuss, M.D., Sutton; Russell Gorthey, M.D., Lincoln; George B. Salter, M.D., Norfolk.

The Board of Trustees met in December, 1969 to study a budget for 1970, had meetings in April and October, and a December, 1970 meeting to study the budget for 1971. Also there were several group telephone conferences. The final budget figure for 1971 is $133,842, roughly $10,000 more than for 1970.

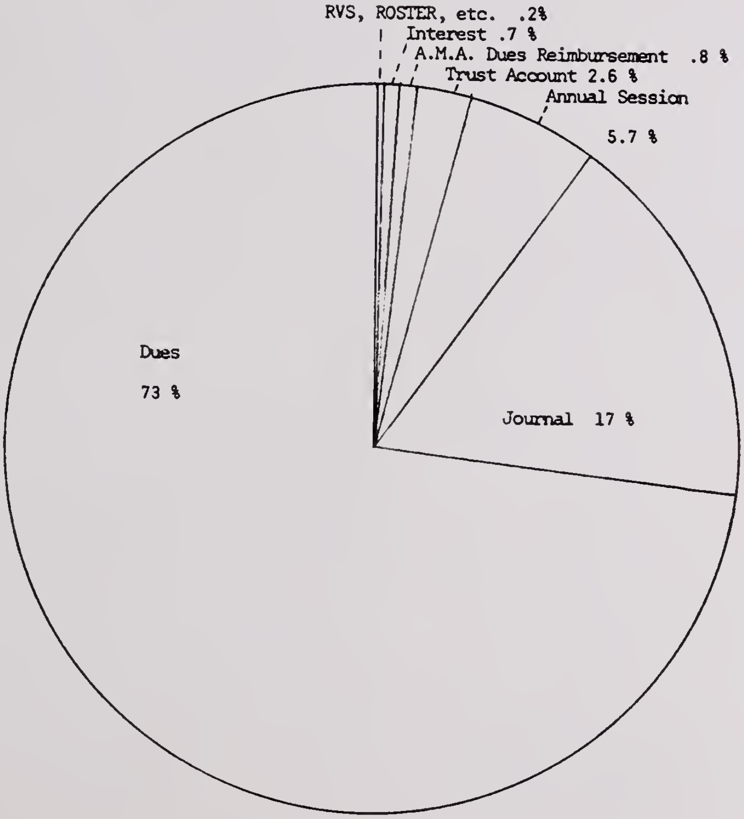
This report concerns the period from January 1, 1970, to December 31, 1970. As reported last year, our budget figure is a combined figure for all activities including the State Journal of the Association. Our records give intemization of all accounts. The total budget for 1970 was $122,948, an increase of $4,788 over the 1969 budget. At the end of the year 1970, we went over the budget by $4,514. Fortunately, we have sufficient reserves to pick up a deficit but naturally this deficit spending cannot continue indefinitely.

DUES INCREASE — During the year, your Board and Association personnel closely studied all expenditures and considered an increase of dues for 1971. However, because of the necessity for the A.M.A. to increase its dues for 1971 because of similar financing problems, we elected not to increase the State Association dues for 1971, but to continue studying our activities and expenses with the probability of a need to increase the dues for 1972. The increasing figures for the operation of the activities of our Association are alarming as they are in all areas of this day. We have available figures showing the percentage increase for each item of activity.

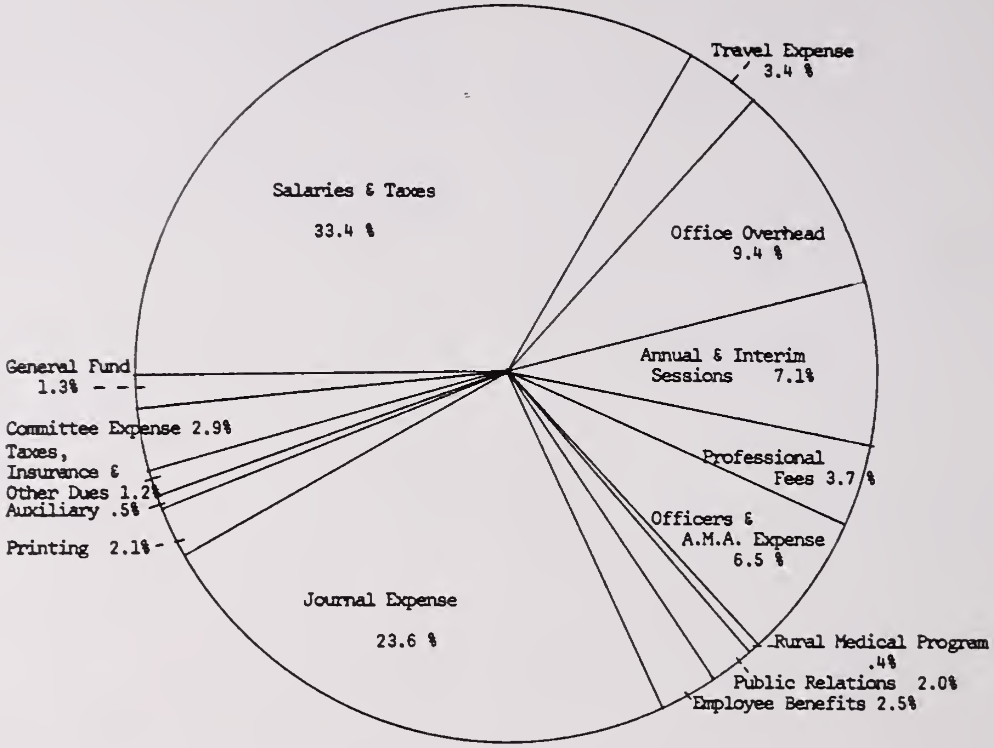
Item	% of Operational Increase Since 1967
Postage (Bulk Rate)	67%
Equipment Maintenance Contracts: Typewriters, Addressograph, Folding Machine, Stuffing Machine, Postage Machine and Rental of Postage Meter	31%
Committee Meetings	54%
Travel	25%
Office Supplies	35%
Public Relations	80%
Rent	31%
Telephone	19%
Journal (Dues Share)	1079%
Salaries	31%
Social Security Taxes	29%
Employee Benefits	70%

As you can see, the Association has experienced a variety of increases in the budget. Also of in-

SOURCES OF INCOME — 1970



EXPENDITURES — 1970



terest to the members is the fact that for the year 1970, total expenditures for the Association averaged $100.30 per member. In other words, $30.30 was expended for each member of the Association over and above the $70.00 dues currently being paid.

Additionally, we can anticipate the following increased expenses yet this year: (1) A revision of the 1965 Relative Value Study at an estimated cost of $5,000; (2) Yearly expenditure for Public Affairs activity with the Nebraska Unicameral estimated at $1,000 per year. This was formerly a biennium cost; (3) accelerated Public Relations program utilizing on-going services of a professional consultant, $1,500 to $2,000; and (4) The Ad Hoc Committee on Peer Review have asked for a budget of $15,000 per year for staff to carry out their proposed program.

Another item of interest is the manner in which our money is received and expended. For purposes of this, we call your attention to the pie charts attached to this report showing income and expenditures of the Nebraska State Medical Association for the year 1970.

Your Board of Trustees, after close study of the increased cost of operation for the past five years, now recommends to the House of Delegates an increase in the dues of $30.00 for the year 1972, raising our dues for 1972 from $70.00 to $100.00.

STATE JOURNAL — The cost of our State Journal is a problem like most other states. Our disbursements over receipts for 1970, were $11,800. We have recently made some changes in our excellent journal in an attempt to overcome the deficit. Also there have been several meetings with representatives of the other North Central Medical Conference states with the idea and hopes of consolidating parts common to all the state journals, yet keeping state identification.

NEBRASKA - SOUTH DAKOTA R.M.P. — The Nebraska-South Dakota R.M.P. which was in its fourth year in 1970, will be dissolved and each state will have its own program as of July 1, 1971. As in the past, this account is kept separate from our State Association account.

HEADQUARTERS SPACE — Our committee meeting facilities have greatly improved in our new location, and the Board believes the decision to make the move was correct. We continue having an excellent and loyal office force.

Respectfully submitted,
R. RUSSELL BEST, M.D.,
Chairman.

REPORT OF AD HOC COMMITTEE ON PEER REVIEW

Dan A. Nye, M.D., Kearney, Chairman; R. I. Westbrook, M.D., Sargent; Richard Cottingham, M.D., McCook; Jerry X. Tamisiea, M.D., Omaha; William Jensen, M.D., Omaha; Wesley G. Tomhave, M.D., Lincoln; Charles Landgraf, Jr., M.D., Hastings; James Dunlap, M.D., Norfolk; John P. Heinke, M.D., Scottsbluff.

The Association's Ad-Hoc Committee on Peer Review, appointed by the Speaker of the House of Delegates in October, 1970, has held several meetings. The Committee presents the following report as a mechanism for establishment of a peer review procedure for the State of Nebraska under the auspices of the Nebraska State Medical Association.

1. That a peer review mechanism be established in the State of Nebraska.

2. The scope of peer review shall encompass all services performed by a physician. Peer review is the review by fellow physicians to determine the appropriateness of, and adequacy of, medical care.

3. The Peer Review Committee will review any case brought to the Committee by a physician or a patient. Third party carriers may submit a case for peer review after obtaining written authorization from the patient to appear in the patient's behalf.

4. The N.S.M.A. should establish, as a standing committee of the N.S.M.A., a State Peer Review Committee for Nebraska.

   a. Functions:

      (1) To act as a Peer Review Committee to which decisions of the Regional Peer Review Committees may be appealed, either by the physician, the patient, or the third party carrier with the patient's written consent.

      (2) To aid in the establishment of, and coordination of, the Regional Peer Review Committees.

      (3) To establish, with consultation of existing Peer Review Committees, the mechanisms of gathering information, the recording, and the analysis of cases reviewed so that there can be a uniform method of peer review activities in Nebraska.

      (4) To advise all interested parties of the mechanisms established for initiating peer review in Nebraska.

      (5) To educate the physicians of Nebraska as to the function and meaning of peer review as well as to disseminate medically useful information obtained from such peer review activities.

      (6) To establish at their discretion an advisory committee of specialists as required to assist the State Peer Review Committee and Regional Peer Review Committees in completing proper review of a case. The details of this Committee are left to the discretion of the State Peer Review Committee.

   b. The State Peer Review Committee shall consist of fourteen members who are members of the Nebraska State Medical Association and actively engaged in the practice of medicine, appointed by the President of the Nebraska State Medical Association. Membership shall consist of:

      (1) Four members who are engaged in General Practice and at least one of whom is a member of the American Academy of General Practice.
      (2) One urologist.
      (3) One orthopedic surgeon.
      (4) One general surgeon.
      (5) One internist.
      (6) One obstetrician-gynecologist.
      (7) One pathologist.
      (8) One radiologist.
      (9) One psychiatrist.
      (10) One anesthesiologist.
      (11) One pediatrician.

   All of the specialists shall be certified by their respective Specialty Boards. The Committee members should be selected on the basis of geographical distribution to be representative of all areas in Nebraska. The Committee will elect its own chairman. No member may be appointed to any of the Peer Review Committees in Nebraska who is serving as a medical director of a third party carrier or serving as a member of its Board of Directors. No member of any Peer Review Committee should sit in review of his own case.

   c. The term of service on the Committee shall be three years with the terms to be staggered as follows for the initial Committee:

      (1) Five members, one year.
      (2) Five members, two years.
      (3) Four members, three years.

5. Regional Peer Review Committees will be established throughout Nebraska with the assistance and coordination of the State Peer Review Committees.

   a. The Regional Peer Review Committees shall be established on the basis of N.S.M.A. Councilor Districts. The State Peer Review Committee shall contact the N.S.M.A. Councilors for the establishment of the Regional Peer Review Committees as that group should bear the responsibility for organization at the local level. Should a Regional Peer Review Committee not be implemented in ample time as judged by the State Peer Review Committee, the State Peer Review Committee would have the ability to merge adjacent districts for the purpose of Peer Review.

   b. Regional Peer Review Committees will function utilizing the mechanisms established by the State Peer Review Committee. All Peer Review activities will first be reviewed by the Regional Peer Review Committee. Any decision of the Regional Peer Review Committee may be appealed to the State Peer Review Committee by the physician or patient or third party carrier acting with the patient's consent. The reviews made by the Regional Peer Review Committee will be reported to the State Peer Review Committee in a manner prescribed by the State Peer Review Committee.

   c. The number of members, their appointment, and their term of office shall be determined by the physicians in each geographic area for which the Regional Peer Review Committee will function.

6. In order for the Regional and State Peer Review Committees to function in a coordinated fashion which will require the expenditure of the least amount of the physicians' time, it will be necessary to acquire full-time staff personnel to aid in peer review activities. Initially, the staff would consist of one person, but as necessity dictates, the numbers will be expanded. Initially, an amount of $15,000 should be budgeted by the Board of Trustees to cover the costs

of salary and travel expenses for this individual.

a. Function:

(1) To receive all requests for initiation of peer review in the state of Nebraska.

(2) To collect all information necessary for the review of the case prior to the meeting of the Regional Peer Review Committees.

(3) To inform the Regional Peer Review Committee that will review the case, that the case will be reviewed at its next meeting.

(4) To be present at the meeting of the Regional Peer Review Committee to record its findings and actions using a format established and approved by State Peer Review Committee.

(5) To collate all actions by Regional Peer Review Committees in a manner prescribed by the State Peer Review Committee so that they may be reviewed and analyzed by that committee.

(6) To assist the State Peer Review Committee in informing the Regional Peer Review Committees of the knowledge gained in reviewing cases, thereby educating physicians in Nebraska as to problem areas, acceptable standards of practice, etc.

(7) All Peer Review Committee activities in the State of Nebraska shall be financed by the Nebraska State Medical Association. All Peer Review Committee members will serve without compensation.

(8) An annual budget shall be submitted to the N.S.M.A. by the State Peer Review Committee in consultation with the Regional Peer Review Committees.

(9) Since the function of peer review in Nebraska will encompass the reviewing of cases in which there is dispute over fees, the Constitution and By-Laws Committee should be instructed to make such changes as required to remove that function from the Council on Professional Ethics. In addition, the State Peer Review Committee should be made a standing committee of the N.S.M.A. and the appropriate Constitutional revisions submitted for approval.

(10) The activities of all the Peer Review Committees shall have no disciplinary functions. If cases are reviewed in which it appears disciplinary actions should be considered, these would be referred to the Council on Professional Ethics for their consideration. In addition, the State or Regional Peer Review Committees will refer to the appropriate standing committees of the N.S.M.A. any other matters that it encounters that are outside the purview of peer review.

Respectfully submitted,
DAN A. NYE, M.D.
Chairman

SPECIAL REPORT FROM THE CHAIRMAN OF THE AD-HOC COMMITTEE ON PEER REVIEW

When the final draft was drawn up at the last meeting of this Committee on March 31st, there were only four members present with five members being absent. Since, I, as Chairman, am in disagreement with parts of this report, I feel compelled to voice my thoughts as well as some other members' of this Committee.

My objection primarily stems around the fact that third party carriers cannot be involved with Peer Review unless an authorization is signed by the patient to take a case to a Peer Review Committee.

Since 95 to 99 per cent of all input in Peer Review will come from third party carriers, it is impossible to have meaningful, worthwhile, enforceable Peer Review if third party carriers are not involved. The majority of patients will not sign an authorization to take a case to Peer Review for fear that they will offend the doctor, or will feel that they have no obligation to the third party, regardless of what their doctor has done or what the circumstances are. There are only four third party carriers with which we can deal now: Mutual of Omaha, Blue Cross-Blue Shield, Welfare and Military Medicare or Champus. All other insurance companies have their Claims Analyst go over their claims and if there is some question, the Medical Director may be involved or not, and he will make the final decisions without appeal to any other source. No other third party has asked the medical profession to help adjudicate their claims. And, as this document now reads, it will be extremely difficult for these third party carriers to come to the medical profession for advice. This is simply making the situation more difficult and dividing the insurance companies and the doctors.

I would like to call the House of Delegates' attention to the action of this House at the Session in September, 1968, at which time a resolution from the Omaha-Douglas County Medical Society was approved by this House. It is a long report, I will simply point out some pertinent facts about this House's action regarding the adoption of usual and customary fees. The House of Delegates recommended and endorsed the "concept of usual and customary insurance coverage to meet its traditional obligation to provide medical service to all who need it while preserving the doctor-patient relationship, provided the following four recommendations were adopted":

1. The elimination of "participation" requirement.
2. Acceptance and utilization of the American Medical Association's definition of "usual and customary and reasonable" fees.
3. A strong and enforceable Peer Review Committee System.
4. Implementation of the proposed changes in Blue Shield administrative procedures.

The report goes on "of these, the necessity for a strong Peer Review Committee is of vital importance. Council or District Peer Review Committees must actively carry out their responsibilities in order to protect the policy holder, the insurance company and the individual physician. The Board of Councilors in Kearney in September of 1968, accepted the responsibility for developing Peer Review Committes in each Councilor District."

"This Committee would further recommend that the Peer Review Committees be utilized as Committees of Investigation. Upon receipt of notification from the Policy Committee, each Councilor Committee shall have the responsibility to investigate thoroughly and fairly any complaint received. Upon completion of its investigation, this Councilor Committee shall submit a report to the Policy Committee and the Policy Committee shall render a decision upon that complaint. The decision shall then be forwarded to the appropriate complaining individual or organization."

The House adopted several recommendations which included removing the "Participating Physicians Agreement." It also suggested that the complexion of the Board of Directors of the Nebraska Blue Shield be changed, stating that Blue Shield Board members include responsible younger members of the Nebraska State Medical Association, and that a limit be put on doctors' age to serve on the Board of Directors of the Nebraska Blue Shield. It also suggested a limit on the terms of the Board of Directors.

So you see, gentlemen, the action of this present Ad-Hoc Committee Report on Peer Review reverses the policy on commitments made two years ago by this House of Delegates. It should be pointed out that three of the four stipulations of the Ad-Hoc Committee on Usual and Customary Fees adopted by this House in September of 1968, have been accomplished by the Nebraska Blue Shield Board of Directors. They have eliminated the participation requirement. They have accepted the A.M.A. and the Nebraska State Medical Association's definition of usual and customary and reasonable fees. They have implemented the proposed changes in the Blue Shield Administrative Procedures, but a strong and forceful Peer Review Committee system has not been established. We have this obligation and in three years have not been able to accomplish it. The report that our Ad-Hoc Committee on Peer Review is presenting is a totally unworkable mechanism for Peer Review, because it excludes from consideration third party carriers. It will raise serious physician-public relation problems. As I have mentioned above, if we have ineffective or meaningless Peer Review we will have no Peer Review at all by the Nebraska State Medical Association. I still feel that we should, whether we like Peer Review or the concept of Peer Review or not, establish good, strong Peer Review. It is being implemented throughout the states nationally, and we should have a voice in how it is going to work in Nebraska.

At the National Association of Blue Shield Plans meeting this month was adopted the following Policy Statement:

> "It is the sense of this Committee that member Plans should solicit the active cooperation of sponsoring medical societies in design and implementation of effective cost control programs. In the absence of significant response to this request, the Plan itself should undertake the creation and activation of cost control mechanisms required to retard the rising cost of covered benefits."

So you see there is a mechanism from Blue Cross-Blue Shield to establish a Peer Review system. This will have to be done here in Nebraska, if the Nebraska State Medical Association cannot implement one.

I do not need to go into the fact that Peer Review is not only adjudication of fees which is really one of the lesser duties, but will have a duty of the expanding services in the hospital and nursing homes, such as Utilization Review for hospitals, including the high costs of physicians' services in pathology and radiology, as well as surgery and medicine.

Eighty-five per cent of the spiralling costs of medical care, although primarily hospital costs, are initiated by physicians. The government is anxious to point this out. Our job as physicians on Peer Review Committees can help contain these costs, by educating the physicians regarding how these costs are initiated and how they are reflected.

The Reference Committee has the following choices, as I see it:

1. Adopt the Peer Review Study Committee's recommendation.
2. To amend certain aspects of this proposal, particularly regarding the third party carrier.
3. To reject the whole report, and advise a new study. However time is really too short to do this and come up with an effective Peer Review Committee proposal.

I feel that this Peer Review Committee should be instituted **now** in a meaningful, effective and enforceable manner.

I wish to thank each member for their efforts. Each member tried his best to come out with a workable solution, and the difference of opinion of the members does not reflect on any member, but simply points out the different ideologies and philosophies regarding Peer Review, the government and third party carries. This is reflected throughout the nation and not simply in our State Association.

Respectfully submitted,
DAN A. NYE, M.D.
Chairman, Ad-Hoc Committee
on Peer Review

REPORT OF NEBRASKA MEDICAL FOUNDATION, INC.

At the writing of this report, the Foundation will have compiled seven years of activity in its expanded loan program. The figures cited below are ample evidence of the important role that the Foundation has played during these past years in assisting medical and allied health students to obtain financing for their respective educational pursuits.

During this time, the Foundation has been forced to meet its guarantee of five loans which have become the property of the Foundation. In these instances, the Foundation continues to pursue efforts to collect these delinquent obligations.

It is interesting to note that the 1971 Nebraska Legislature has expressed interest, through several pieces of legislation, in entering the loan business for medical students. The principal bill in this area is LB 712, which provides for the establishment of a loan program through the University of Nebraska College of Medicine providing up to $4,500 per year for medical students. The bill also has a forgiveness clause if the student practices in a Nebraska community of less than 7,500 population. At this time it is too early to determine whether or not this legislation will be passed. If it is successful, it would undoubtedly have an impact on the demand for loans with the Nebraska Medical Foundation.

As we reported at the last Annual Session, an attempt has been made to determine whether or not cancer and heart research funds of the Foundation could be used to provide scholarships for medical students. To date we have not received sufficient information to make this determination and therefore a decision will have to be delayed until all facts related to this subject are accumulated.

We are listing below grand totals for the loan program from March, 1964, to April, 1971. Also listed is the source of contributions received from April 1, 1970, to April 1, 1971.

	No. of Loans	Amount
Medical Students	751	$ 823,180
Dental Students	145	159,800
Interns	25	27,000
Residents	37	37,150
Nursing	4	2,300
Medical Technology	4	3,000
Physical Therapy	7	4,900
	974	$1,056,080

Physician Contributions	$2,309.50
Auxiliary Contributions	1,538.18
Miscellaneous Public Contributions	804.00
	$4,651.68

In conclusion, we wish to extend our thanks to the physicians, auxiliary and our many friends for their continued support of the Nebraska Medical Foundation. Your continued support is needed and appreciated as the Foundation continues to meet the obligations of its active loan program.

Respectfully submitted,
LEROY W. LEE, M.D.
President

REPORT OF BLOOD AND BLOOD PRODUCTS COMMITTEE

Jerald Schenken, M.D., Omaha, Chairman; Harold McConahay, M.D., Holdrege; Arthur Larsen, M.D., Omaha; Harold Dahlheim, M.D., Norfolk; David L. Kutsch, M.D., Lincoln; Glen F. Lau, M.D., Lincoln.

The Blood and Blood Products Committee did not meet during the 1970-71 year. No problems were officially referred to it for consideration. It must be mentioned, however, that lawsuits in the states of Illinois and Pennsylvania have been of some concern to your Chairman. In these cases, hospitals and/or physicians were held liable for the development of hepatitis subsequent to a blood transfusion, even though there was no evidence of negligence. The courts apparently applied the doctrine of strict liability for the sale of a product.

A State of Nebraska statute, adopted in 1967, specifically designates "procuring, furnishing, donating, processing, distributing, using whole blood, plasma, blood products, blood derivatives, and other human tissues such as corneas, bones, or organs for the purpose of injecting, transfusing, or transplanting any of them in the human body is declared, for all purposes, to be the rendition of a service . . . not to be a sale . . ."

While this, like any statute, does not protect physicians and hospitals from the filing of such lawsuits, it does go a long way toward defining our position with regard to the administration of blood and blood products and will tend to protect us from judgments (except where negligence has occurred) unless the Nebraska courts apply the doctrine of strict liability to the provision of a service as well as the sale of a product.

Respectfully submitted,
JERALD SCHENKEN, M.D.
Chairman

REPORT OF CONSTITUTION AND BY-LAWS COMMITTEE

Houtz Steenburg, M.D., Aurora, Chairman; Richard Crotty, M.D., Omaha; H. D. Kuper, M.D., Columbus; William Gentry, M.D., Gering; Harold M. Nordlund, M.D., York; John A. Brown, III, M.D., Lincoln.

In accordance with the directives of the House of Delegates at the October, 1970, session, the Constitution and By-Laws Committee hereby presents the recommended changes in committee structure and membership wording:

1. All reference in the Constitution and By-Laws to the following committees would be deleted:

   Cardiovascular Committee
   Continuing Committee on Medical Practice
   Credentials Committee
   Diabetes Committee
   Planning Committee
   Rehabilitation Committee

2. The Blood and Blood Products Committee be combined with the Hospital and Professional Relations Committee, and current references to these committees in the Constitution and By-Laws be deleted. The scope of the new committee, entitled the Committee on Hospital and Professional Relations, shall read as follows:

> "The Committee on Hospital and Professional Relations shall be concerned with the ethics, responsibilities, standards, contractural relations, general policies and procedures relevant to medical practice in hospitals. It shall render an annual report to the Board of Councilors and House of Delegates."

3. The Civil Defense and Disaster Committee be combined with the Emergency Medical Service Committee, and current references to these committees in the Constitution and By-Laws be deleted. The Traffic Safety Committee was an interim committee; consequently, no description was placed in the By-Laws. The scope of the new committee, entitled the Emergency Medical Service Committee, shall read as follows:

> "The Emergency Medical Service Committee shall concern itself with emergency health plan-

ning and operation. The Committee shall serve as the Association's representative in the dissemination of information regarding the development and implementation of remedial measures pertaining to national emergencies, local disaster situations and transportation safety. The Committee shall coordinate their activities with other agencies expending their efforts in developing emergency preparedness technique."

4. The Committee on Occupational and Industrial Health, the Public Health Committee and the Tuberculosis and Other Respiratory Disease Committee be combined, and current references to these committees in the Constitution and By-Laws be deleted. The scope of the new committee, entitled the Public Health Committee, shall read as follows:

> "The Public Health Committee shall be concerned with public health and occupational health problems of the people of the state and bring information they feel is of importance to the members of the Association."

5. The Insurance Committee be combined with the Prepayment Medical Care Committee, and current references to these committees in the Constitution and By-Laws be deleted. The scope of the new committee, entitled the Committee on Insurance and Prepayment Medical Care, shall read as follows:

> "The Committee on Insurance and Prepayment Medical Care shall concern itself with insurance contracts incident to the practice of medicine and of importance to the Association member. The Committee shall also be a liaison committee between the members of the Nebraska State Medical Association and the Nebraska Medical Service (Blue Shield). It shall convey to the Nebraska Medical Service (Blue Shield) any complaints, criticism and/or constructive suggestions, received from the members of the Nebraska State Medical Association.
>
> "The Committee on Insurance and Prepayment Medical Care shall also make its services and counsel available to all other companies doing business in the health insurance field.
>
> "It shall be conversant with the work being done by the Council on Medical Service of the American Medical Association, and shall cooperate with this Council in furthering its purpose.
>
> "It shall report annually to the Board of Councilors and to the House of Delegates the progress made and the methods of operation of Nebraska Medical Service. No member of the Board of Directors or officers of the Nebraska Medical Service shall be eligible for appointment to this Committee."

6. Student Membership — Amend Article 4 (Membership), Section 3, of the Constitution by adding a 6th membership classification entitled "Student."

In the By-Laws, Chapter 1, add a new Section 7 to read as follows:

> "Student membership shall be granted to all regularly enrolled medical students of the University of Nebraska College of Medicine and the Creighton University School of Medicine upon direct application to the Nebraska State Medical Association and payment of dues as prescribed from time to time by the House of Delegates. Student members will be eligible to attend all meetings of the Nebraska State Medical Association and shall also be entitled to receive the Nebraska State Medical Journal, but they shall not be entitled to hold office in the Association."

In the By-Laws, add a new Section 6 to Chapter 6 as follows:

> "Four student delegates shall be entitled to hold a voting membership in the House of Delegates. There will be two delegates from each school, comprised of one junior and one senior medical student from the University of Nebraska College of Medicine, and one junior and one senior medical student from the Creighton University School of Medicine."

The Committee further recommends that an in-depth review of the Constitution and By-Laws be made by this Committee and a report of recommendations will be made to the Fall Session of the House of Delegates.

Respectfully submitted,
HOUTZ STEENBURG, M.D.
Chairman

REPORT OF EMERGENCY MEDICAL SERVICE COMMITTEE

Kenneth F. Kimball, M.D., Kearney, Chairman; Lynn W. Thompson, M.D., Blair; Keith Shuey, M.D., Tecumseh; Harris B. Graves, M.D., Waterloo; Loren E. Imes, M.D., Grand Island; Donald F. Prince, M.D., Minden; Floyd Shiffermiller, M.D., Ainsworth; John J. Ruffing, M.D., Hemingford; Ralph Moore, M.D., Omaha.

The Committee would recommend to the House of Delegates the approval of the following programs and concepts:

1. There is now established a National Organization for certification of Ambulance Attendants known as the Council on Emergency Medical Technicians — Ambulance. The examination for this position will be conducted nationally and people will be certified at the national level as is now done by laboratory and x-ray technicians. We endorse the concept of a single level of training for ambulance attendants and endorse the efforts on the part of the State Health Department to provide this training at each community in the state. It has been clearly defined and is well understood by them that this is to be done under the direction and with the cooperation of the physician in the local community although the services of training officers, people versed in extrication, etc. may certainly be used.

We recommend the endorsement of the House of Delegates of the effort on the part of the State Health Department to accomplish training throughout the State of Emergency Medical Technicians—Ambulance under the direction of the local physician.

2. Coordination of emergency training and activities in the community is direly needed. Only the physician is competent to evaluate these specific problems in his own community; and it, therefore, becomes essential that one physician from each community be designated as a contact man to work with the State Health Department and with this committee in Emergency Planning and Development. Several years ago the House of Delegates approved asking each County Society to designate a physician as such, and we wish to inform the delegates that we are at this time contacting

each community and asking for the name of one such physician.

3. The Trauma Committee of the Nebraska Chapter, American College of Surgeons, in cooperation with the National Insurance Institute, is providing programs on emergency training at the community level for physicians who desire such activity throughout the State of Nebraska. If such programs would be of value to you either as a County Medical Society meeting, as a Hospital Staff meeting, or as an extra meeting one evening, the physicians should contact Doctor Jack German, c/o Surgery Department, Veterans Administration Hospital, Omaha, and he will arrange for the local members of the Committee to contact interested physicians and set up training programs that are oriented to the needs of that community.

Respectfully submitted,
KENNETH F. KIMBALL, M.D.
Chairman

REPORT OF MENTAL HEALTH AND MENTAL RETARDATION COMMITTEE

J. Whitney Kelley, M.D., Omaha, Chairman; C. H. Farrell, M.D., Omaha; James Dunlap, M.D., Omaha; Robert Osborne, M.D., Lincoln; John Baldwin, M.D., Lincoln; Charles Landgraf, Jr., M.D., Hastings; Henry G. Waters, M.D., Omaha; Robert Wigton, M.D., Omaha; C. R. Frerichs, M.D., Beatrice.

Your Mental Health Committee, which is quite diversified in its membership, has been discussing at great length for over a year, all of the matters concerning the sex sociopath. The rash of adverse publicity for six weeks time in the Omaha newspapers about the sex sociopath situation, and the subsequent declaration of the Pedersen amendment as unconstitutional, necessitated careful study of the sex sociopath law, and such a study was done.

Your Committee wrote a bill which seemed to embody the necessary features as far as a sex sociopath law was concerned, making a radical change in the concept. From a civil procedure it became a criminal procedure in which the discovery of aberrant sexual behavior was decided in the legal manner, and the medical features of the diagnosis and treatment of a sex sociopath were a medical matter.

After your Committee had written up its bill, it worked in close cooperation with the Bar Association and with Senator Pedersen. This bill was presented before the hearings of the Legislature's committee and it was presented to the Legislature by Senator Terry Carpenter. It was reported out of committee to the floor on a 7-0 vote.

Since that time your Committee has been involved in a cooperative study with the Warden of the State Penitentiary and this study will continue on through the next year.

Respectfully submitted,
J. WHITNEY KELLEY, M.D.
Chairman

REPORT OF POLICY COMMITTEE

C. R. Brott, M.D., Beatrice, Chairman; Roger D. Mason, M.D., McCook; J. Whitney Kelley, M.D., Omaha; Frank Tanner, M.D., Lincoln; Robert J. Morgan, M.D., Alliance.

The Policy Committee has held several meetings since the October, 1970, session of the House of Delegates at which time our annual report was presented. This report will present information of the Committee's activities and present specific recommendations for the consideration of the House of Delegates.

1. The Committee met with representatives of the Omaha-Douglas County Medical Society to discuss implementation of the resolution adopted in October by the House of Delegates stating that the Omaha-Douglas County Medical Society should be responsible for peer review and adjudication requested by third party payors when a member of that county medical society is involved. Those attending a meeting agreed unanimously that the procedure, prior to consideration of the Ad-Hoc Committee Report in April, 1971, should be that the Omaha-Douglas County Medical Society Peer Review Committee and the Policy Committee be informed of problem cases by patients, physicians, carriers and intermediaries wishing peer review in that county. The Omaha-Douglas County Medical Society would serve as the peer review mechanism for its members' cases and the Policy Committee would serve as the ultimate recourse for the County Society's special problem cases. The Policy Committee would serve as the peer review mechanism for the balance of the state. This agreed upon procedure was implemented in November of 1970 and has been carried on to date. This mechanism should now be reconsidered in light of the report of the N.S.M.A. Ad-Hoc Committee on Peer Review.

2. The Policy Committee was presented with several complaints regarding certain members' ethics. These communications were forwarded to the N.S.M.A. Council on Professional Ethics and in certain instances, to the State Department of Health. It is the Committee's understanding that a solution is being studied in each case.

3. Representatives of the Association met with Governor J. J. Exon soon after his inauguration as Governor of the State of Nebraska. The Committee felt the discussions were meaningful and of value to all parties involved and continual communication with the Governor's Office will be maintained in an effort to foster better knowledge of public health problems.

4. The Nebraska-South Dakota Regional Medical Program has continued its operation of ongoing projects while developing and reorganizing for the one state program that will evolve on July 1, 1971. The Policy Committee was active in selecting the single state Regional Advisory Group which, as of this date, has begun to function. Various Policy Committee members have also been active in developing the administrative function that will operate the one state program. There has been continuing discussion and thought given to whether the Regional Medical Program should continue as organized at present or whether a separate corporation should be developed for operational purposes.

5. Several items were presented to the Policy Committee for consideration and possible submission to the House of Delegates during the March 27th and 28th "Think Conference." This Association Conference included our officers, elected officials and the Board of Councilors. This Conference allows an indepth discussion of the broad range of activities in which the Association engages, as well as an indepth analysis of activities which either directly or indirectly affect the operation of our organization. The first item presented to the Policy Committee

for referral to the House of Delegates was that of reconsideration of obligatory A.M.A. membership. The Policy Committee has considered this Constitutional requirement in depth and has reached the conclusion that to reflect the wishes of the membership we represent, a Constitutional revision should be made. **The majority of your Policy Committee therefore recommends that as of January 1, 1972, mandatory A.M.A. membership be deleted as a requirement for membership in your county society and state association. The Committee urges, however, that physicians recognize the importance and benefits of a united approach by organized medicine at all levels.**

6. A proposal was considered by the Policy Committee which would initiate an interchange of delegate representation between our Association and the Nebraska Dental Association. It was felt that an interchange of one delegate with or without voting power, would serve to better enhance communications between the organizations. **The Policy Committee therefore recommends that it be authorized to pursue this possibility with representatives from the Nebraska Dental Association.**

7. The recent "Think Conference" as previously discussed proved to be of real value, as did the original activity such as this scheduled one year ago. The concensus of those present was that this should be an annual occurrence with adequate budgeting to provide the necessary resources on a continuing basis. **Your Policy Committee therefore recommends that an "Activities Review Conference" (Think Conference) be sanctioned and established as an annual function for N.S.M.A. officers and elected officials, and that budgeting be provided.**

8. An item which has been considered by many state associations and discussed periodically by our organization is whether or not a change should be made in our Constitutional name. The word "state" in some instances has implied a relationship with state government as is evidenced by a sizable number of communications with our Headquarters Office. To eliminate this situation while allowing our proper relationship with national and local organizations to remain, it is recommended that a change be made in our N.S.M.A. Constitution. **The Policy Committee recommends that the word "state" be deleted and that the new name of our organization be the Nebraska Medical Association. It is further recommended that the Constitution and By-Laws Committee be directed to implement this change in the Constitution and By-Laws of the Association.**

9. Recent correspondence prompted the Policy Committee to consider whether or not the 1965 N.S.M.A. Relative Value Study should be updated or revised. It was recognized that some states have developed documents such as this in recent months and it was evident to the Committee that various organizations have developed procedural code manuals such as the 1970 A.M.A. Current Medical Terminology. **The Policy Committee recommends that the N.S.M.A. Relative Value Study Committee be asked to consider the feasibility of revising the 1965 Relative Value Study recognizing the potential use of current manuals which are available and studying all coding mechanisms currently being used. The Committee further recommends that if the Relative Value Study Committee determines it is advisable to provide an updated edition for our Association that the Committee be authorized to proceed with the revision with adequate Association funding provided.**

The Policy Committee has had a large number of items presented to it, including both those requiring a policy decision and those indicating a need for thorough discussion and understanding. Your Committee has handled each situation to the best of its ability and stands ready to undertake additional activities which might be presented to it during this session of the House of Delegates. There are many items, including socioeconomic matters, medical care items and legislative proposals that will affect the practice of medicine in years to come. The Policy Committee recognizes the need for member participation at all levels of organized medicine. We commend the physicians who have taken an active part in the deliberations of their component societies and urge all Association members to become involved in all facets of organized medicine to present a unified approach in meeting the forces which would alter the time honored mechanisms for serving the citizens of this country.

Respectfully submitted,
C. R. BROTT, M.D.
Chairman

REPORT OF PUBLIC RELATIONS COMMITTEE

William T. Griffin, M.D., Lincoln, Chairman; Willis D. Wright, M.D., Omaha; Theo. Koefoot, Jr., M.D., Broken Bow; William Doering, M.D., Franklin; John W. Porter, M.D., Beatrice; Donald Matthews, M.D., Lincoln; G. P. McArdle, M.D., Omaha; Mrs. John C. Filkins, Omaha.

This is a progress report for the Public Relations Committee. The Committee's annual report, including specific recommendations, will be developed for presentation at the October session of the House of Delegates.

The Committee has officially met on five separate occasions. In addition to the input of the members, the Committee has sought and received guidance from an official of the A.M.A., from presidents of various county societies, from N.S.M.A. members and from executives of the various media.

The following can be listed as immediate results of the Committee's work:

1. A state-wide survey of physician attitudes has been completed.
2. The N.S.M.A. membership BULLETIN has been completely revised and enlarged.
3. A public relations firm has been hired to assist in the development of news releases and to advise on the overall public relations endeavors of the Association.
4. A completely new concept of developing news releases utilizing the advice of various Association members has been started.
5. Feature articles are being placed in publications such as THE NEBRASKA FARMER which present medicines' concerns and opinions on various subjects.

The Committee also has various objectives in mind:

1. To further inform our membership of Association activities.
2. To better inform the lay public of what the

physician is doing for his patient, his community, his hospital, etc.

3. To develop information concerning medical legislation and present it to members of the Legislature.
4. To develop the capability to foresee potential problems and to inform the public of the consequences rather than simply reacting to adverse comment after the damage has been done.
5. The Committee is developing a first aid chart for schools and industry covering all the various first aid measures for minor emergencies. The Committee is also developing an annual "Health of the State" report.
6. The Association's public service announcements (Health Tips) will continue to be sent all media.
7. Plans are underway for the Hall of Health exhibit at the Nebraska State Fair.

The Committee takes this opportunity to enlist the aid of all Association members asking that they suggest means of improving the tarnished image of the physician.

Respectfully submitted,
WILLIAM T. GRIFFIN, M.D.
Chairman

REPORT OF SUB-COMMITTEE ON ATHLETIC INJURIES

John G. Yost, M.D., Hastings, Chairman; Stanley M. Bach, M.D., Omaha; R. B. Benthack, M.D., Wayne; Bruce F. Claussen, M.D., North Platte; S. I. Fuenning, M.D., Lincoln; Paul Goetowski, M.D., Lincoln; Otis Miller, M.D., Ord; L. R. Smith, M.D., Kearney; John E. Murphy, M.D., Aurora; Richard Hammer, M.D., Lincoln; George Sullivan, RPT, Lincoln; Wayne Wagner, A.T., Omaha; Mr. Harold McClure, Kearney.

At the present time, the Sub-Committee on Athletic Injuries is in the process of analyzing the results of measuring the Class A wrestlers at the State Wrestling Meet.

From our preliminary survey, I believe we can assume that this may be a breakthrough for future policies concerning weight in wrestlers.

At the present time, we are in the process of formulating our program for August of this year. The program for this year will feature Doctor Don O'Donahue of Oklahoma City, a nationally known authority on the treatment of knee injuries in the athlete. We will also have Mr. Jack Rockwell, who, as a trainer, is equally an authoritative source.

It is our sincere hope that the members of the House of Delegates, especially those of you who are associated with the treatment of athletic injuries in your home communities, will be able to attend this meeting. We would also appreciate your advertising the meeting amongst your county societies.

In the past, we have had excellent responses from all the paramedical associations, the Coaches Association, the Nebraska School Activities Association, etc., but have felt that we have not had the response from the members of the Nebraska State Medical Association, and especially from the House of Delegates, that the efforts of putting on the program should warrant.

Respectfully submitted,
JOHN G. YOST, M.D.
Chairman

REPORT OF COMMITTEE ON GERIATRICS

John A. Brown, M.D., Lincoln, Chairman; D. W. Kingsley, Sr., M.D., Hastings; F. Paustian, M.D., Omaha; Charles Bonniwell, M.D., Omaha; Vernon Ward, M.D., Omaha; Robert G. Osborne, M.D., Lincoln.

This Committee has been presented with a referred resolution from the Advisory Council on Hospital and Medical Facilities of the State Department of Health through the Policy Committee.

The resolution is lengthy, but in substance asks the members of the State Medical Association who have patients in nursing homes, to make a survey of the census of Nebraska nursing home patients detailing the level of care these patients require.

This was received during the month of April, 1971, and is the only business that has been presented this Committee.

A survey structure is being analyzed so that a statistically accurate report can be made which will represent only one brief period.

Committee and full physician member cooperation will be needed to complete this request.

Respectfully submitted,
JOHN A. BROWN, M.D.
Chairman

Report of Board of Councilors

First Session

The first session of the Board of Councilors was held April 25, 1971, at the Omaha Hilton Hotel, Omaha, Nebraska. The following Councilors were present: Drs. Charles D. Bell, Lincoln; H. C. Stewart, Pawnee City; Robert Benthack, Wayne; Robert Sorensen, Fremont; Houtz Steenburg, Aurora; Lyle Nelson, Crete; Robert Waters, O'Neill; H. V. Smith, Kearney; Charles Landgraf, Hastings; and A. J. Alderman, Chadron.

The meeting was called to order by the Chairman, Dr. Steenburg.

The minutes of the 1970 Fall Session were approved as printed in the December issue of the Nebraska State Medical Journal.

Dr. John Schenken presented a series of slides developed by the Council on Medical Staffs.

Dr. Steenburg called for the election of one member of the Board of Trustees, the term of Dr. Carl Frank expiring. It was moved and seconded that Dr. Frank be reelected to another term on the Board of Trustees. This was approved.

The election of one member on the Medicolegal Advice Committee was called for, the term of Dr. W. O. Brown expiring. The Board of Councilors approved the reelection of Dr. Brown to this committee.

The election of one member on the Council on Professional Ethics was called for, the term of Dr. Charles Ashby expiring. The Councilors approved the reelection of Dr. Ashby to this Council.

The Board of Councilors next considered the reports as they appeared in the Handbook. The Financial Audit, the Report of the Board of Trustees and the Report of the Delegate to the A.M.A. were approved.

The Report of the Ad-Hoc Committee on Peer Review was considered, and following discussion it was moved that there be a limit to the number of terms for physicians serving on the Peer Review Committees. This was seconded and carried. This report was approved.

The following reports were approved: Nebraska Medical Foundation, Blood and Blood Products, Constitution and By-Laws, Emergency Medical Service, Mental Health and Mental Retardation, Policy, Public Relations, Sub-Committee on Athletic Injuries and Geriatrics.

Resolutions #1 through #9 were also approved.

Dr. Brott discussed the matter of the Physician Assistant. He said he thought the Association should study all matters relating to the Physician Assistant. It was moved that a recommendation be made to the House of Delegates that a Study Committee be set up to review all of the matters relating to the Physician Assistant. This was seconded and carried.

The requests for Life Memberships were read and approved.

Dr. Bell called attention to the growing move to National Health Insurance, and moved that the Nebraska State Medical Association take steps to transform the Association into a medical union in accordance with the regulations of the National Labor Relations Board. This was approved by the Board of Councilors.

There being no further business, the meeting was adjourned.

Second Session

The second session of the Board of Councilors was held April 26, 1971. The meeting was called to order by the Chairman, Dr. Steenburg.

Councilors present were Drs. Charles D. Bell, H. C. Stewart, Robert Benthack, Robert Sorensen, Houtz Steenburg, Lyle Nelson, Robert Waters, H. V. Smith, Charles Landgraf, Bruce Claussen and A. J. Alderman.

The minutes of the first session were approved as printed.

No business was presented to the Councilors for consideration, and the meeting was adjourned.

Third Session

The third session of the Board of Councilors was held April 28, 1971. The meeting was called to order by the Chairman, Dr. Steenburg.

Councilors present were Drs. Charles D. Bell, H. C. Stewart, Robert Benthack, Robert Sorensen, Houtz Steenburg, Lyle Nelson, Robert Waters, H. V. Smith, Charles Landgraf, A. J. Alderman, and Bruce Claussen.

The minutes of the second session were approved.

There was discussion concerning the action taken by the House of Delegates just prior to this meeting on Peer Review Committees.

There was also discussion regarding the costs of the Annual Sessions. It was noted that the Scientific Sessions Committee would meet in a month or so, and that a report would be made by this committee at the Fall Session.

There being no further business, the meeting was adjourned.

Report of House of Delegates

First Session

The first session of the House of Delegates was held April 25, 1971, at the Omaha Hilton Hotel, Omaha, Nebraska. The meeting was called to order by the Vice Speaker, Dr. Harry McFadden.

The report of the Credentials Committee showed 63 delegates were present.

The Chair requested that the rules be suspended for a change in the order of business for the selection of a Vice Speaker pro tem. The Chair entertained a motion that Dr. Charles Landgraf be made temporary Vice Speaker to serve for the duration of this session of the House, and this was approved.

A request was received to recognize the formation of a new County Medical Society, the South Central County Medical Society. This society would include the counties of Thayer, Nuckolls, Fillmore and Clay. It was asked that Dr. F. A. Mountford be seated as the delegate for this new county society. This was approved by the House.

Requests were received from the Lancaster County Medical Society and Omaha-Douglas County Medical Society for the seating of replacements of those delegates not in attendance, and these were approved.

Student representatives from the two medical schools were introduced, Mr. Gary Carlton representing the University of Nebraska College of Medicine and Mr. John Mott from the Creighton University School of Medicine.

An oral report was given by Dr. John Gilligan, Chairman of the Medicolegal Advice Committee. He requested that consideration be given to authorizing a representative or representatives to meet with an inter-professional group on matters of malpractice. It was moved that this be done and was suggested that Dr. Gilligan be the member to meet with this group. This was approved by the House. Dr. Gilligan was asked to appear before the appropriate Reference Committee on this matter.

Dr. Steenburg, Chairman of the Board of Councilors, was asked for an oral report from this body which met prior to this session of the House of Delegates. Dr. Steenburg said the Board of Councilors brought three recommendations to the House as follows:

1. Limit the number of terms for physicians serving on Peer Review Committees.
2. Set up a Study Committee to review all of the matters relating to the Physician Assistant.
3. The Councilors approved a motion that the Nebraska State Medical Association take steps to transform the Association into a medical union in accordance with the regulations of the National Labor Relations Board.

These recommendations were referred to Reference Committees for their consideration.

Dr. Schenken presented slides which had been developed by the Council on Medical Staffs.

Dr. McFadden called for approval of the minutes of the 1970 Fall Session as published in the December issue of the Nebraska State Medical Journal, and these were approved.

Appointments of members to Reference Committees were read and these were approved.

Following a short recess, the following Nominating Committee was selected:

District # 1—Dr. S. M. Truhlsen
District # 2—Dr. R. R. Andersen
District # 3—Dr. M. E. Samuelson
District # 4—Dr. James Carlson
District # 5—Dr. Wm. Chleborad
District # 6—Dr. E. J. Hinrichs
District # 7—Dr. V. Franklin Colon
District # 8—Dr. Frank Wanek
District # 9—Dr. Wm. Doering
District #10—Dr. Fred J. Rutt
District #11—Dr. A. B. Albee
District #12—Dr. Raymond Olson

The following assignments were made to the Reference Committees:

Officer and Special Reports

Financial Audit — Reference Committee #1
Board of Trustees — Reference Committee #1
Delegate to A.M.A. — Reference Committee #3
Ad-Hoc Committee on Peer Review — Reference Committee #2
Special Report, Chairman, Ad-Hoc Committee on Peer Review — Reference Committee #2
Nebraska Medical Foundation, Inc. — Reference Committee #3

Committee Reports

Blood and Blood Products — Reference Committee #5
Constitution and By-Laws — Reference Committee #5
Emergency Medical Service — Reference Committee #5
Mental Health & Mental Retardation — Reference Committee #5
Policy (Except Item #1) — Reference Committee #1
Policy, Item #1 — Reference Committee #2
Public Relations — Reference Committee #5
Sub-Committee on Athletic Injuries — Reference Committee #3
Geriatrics — Reference Committee #4

Resolutions

#1 — Surgical Fees — Reference Committee #4
#2 — Uniform Operative & Sterilization Permit — Reference Committee #4
#3 — Study of Welfare Program — Reference Committee #3
#4 — Mandatory A. M. A. Dues — Reference Committee #1
#5 — County Hospital Boards — Reference Committee #4
#6 — Pre & Post Operative Charges — Reference Committee #4
#7 — Opposition to Proposed Peer Review System — Reference Committee #2
#8 — Health Care Plan — Reference Committee #1
#9 — Principles of Health Care Delivery — Reference Committee #1

Other Matters

Board of Councilor Recommendation — Physician Assistant — Reference Committee #5
Board of Councilor Recommendation — Medical Union — Reference Committee #1
Board of Councilor Recommendation — Limiting terms of office for members of Peer Review — Reference Committee #2
Requests for Life Membership — Reference Committee #3
Request for representative to meet with Inter-Professional group on matters of malpractice — Reference Committee #5

Resolutions from the floor were called for, and the following were presented and assigned to Reference Committees:

Resolution #10 — Introduced by Dr. McWhorter, Omaha-Douglas County Medical Society. Re: Public Information Program — Reference Committee #5

Resolution #11 — Introduced by Dr. McWhorter, Omaha-Douglas County Medical Society. Re: Opposition to Federal Statutory Compulsory Peer Review — Reference Committee #2

Resolution #12 — Introduced by Dr. Walker, Buffalo County Medical Society. Re: Support of LB 712 — Reference Committee #3

There being no further business, this session of the House was adjourned.

House of Delegates

Second Session

The second session of the House of Delegates was held April 26, 1971. The meeting was called to order by the Vice Speaker, Dr. McFadden.

The report of the Credentials Committee showed that 50 delegates were present.

Dr. McFadden called for consideration of the minutes of the first session of the House as printed, and these were approved.

The minutes of the first session of the Board of Councilors were also approved.

Dr. McFadden called for reports of the Reference Committees and the following were presented:

Reference Committee #1

Members of your Reference Committee #1 were Drs. Warren Bosley, Chairman; Louis Gogela; Robert Morgan; and Stanley Truhlsen.

Your Reference Committee recommends approval of the Audit as carried in the Handbook and recommends that the Audit contain the signature or name of the person or firm doing the audit and the date the audit was performed.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee heard considerable discussion on the Report of the Board of Trustees concerned particularly with the increase in dues. Your Reference Committee calls attention to the statement of the report of the Board of Trustees, "For the year 1970, total expenditures for the Association average $100.30 per member. In other words, $30.30 was expended for each member of the Association over and above the $70.00 dues currently being paid." The Committee heard a description of the proposed changes in the Journal which may reduce the expenditure necessary for that item. The Committee was particularly pleased with the "pie chart" which accompanied this report. The Committee recommends approval of the report of the Board of Trustees and an increase in dues of $30.00.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee then considered the report of the Policy Committee with the exception of Item 1. The committee considered Items 2, 3 and 4 as generally informative and not requiring any particular action.

Your Committee considered Item 5 and Resolution #4 together, since both considered mandatory A.M.A. membership. Resolution #4 read as follows:

> RESOLVED that Nebraska State Medical Association House of Delegates rescind that portion of its Constitution and By-Laws that requires mandatory membership in A.M.A. in order to be a member of the Nebraska State Medical Association and County Medical Society.
>
> RESOLVED that members who wish and pay the State Medical dues be offered membership immediately so that many loyal members can continue in the State Association and so the State Association will not suffer the financial loss of the dues.

Since at its last meeting, the House of Delegates supported the concept of mandatory A.M.A. membership, the Reference Committee questions the statement that the Policy Committee "reflects the wishes of the membership." Since the House has already taken action and has expressed a stand on this point, the Committee recommends adoption of Item 5 of the report of the Policy Committee in order that this might be brought to the floor of the House of Delegates again.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed. Dr. Francis moved that this matter be tabled, and this was seconded. However, the motion was lost on a hand vote. It was pointed out that the Reference Committee recommended adoption of this portion of the Policy Committee report in order that it could be brought to the floor of the House for discussion, and so that the wishes of the full House of Delegates might be known on this matter. The delegates were reminded that approval of Item #5 of the Policy Committee report would delete the requirement of mandatory dues in the A.M.A. The recommendation of Reference Committee #1 to adopt Item #5 of the Policy Committee report was then approved by the House.

Your Reference Committee recommends approval of Item #6 of the report of the Policy Committee which recommends that we exchange delegates with the Nebraska Dental Association.

Your Reference Committee also approves Item #8 and agrees with the recommendation that the word "state" be deleted. Your Reference Committee suggests the organization be named the Nebraska Medical Society and the proper change in the Constitution and By-Laws be made to implement this change.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded, and following discussion on this change, this was approved by the House.

Your Reference Committee reviewed Item #9 of the report of the Policy Committee and supports the recommendation that the Relative Value Study Committee be asked to consider the feasibility of revising the 1965 Relative Value Study and that a report of this consideration be given to the House of Delegates at the interim meeting in the fall of 1971. Your Reference Committee would emphasize the last sentence of this report, "We commend the physicians who have taken an active part in the deliberations of their component societies and urge all Association members to become involved in all facets of organized medicine to present a unified approach in meeting the forces which would alter the time-honored mechanisms for serving the citizens of this country."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered Resolution #8 presented by the Dawson County Medical Society, as follows:

> WHEREAS a variety of plans are in development on a national level for modification of the delivery of health care, including "Kennedy Plan," "Nixon Plan," "A.M.A. Medicredit Plan," and others, and
>
> WHEREAS the A.M.A. Medicredit Plan proposes to deliver health care to the poor, and to others on the basis of ability to pay, entailing a degree of individual responsibility, and
>
> WHEREAS the remainder of the plans would deliver health care without regard to individual responsibility
>
> BE IT THEREFORE RESOLVED that the Dawson County Medical Society urges and promotes the active support of the Nebraska State Medical Association for the A.M.A. Medicredit Plan currently being considered.

It is the understanding of the Reference Committee that the A.M.A. Medicredit Plan of 1971 as described in Bills S-987 and HR-6672, 6673 and 6674, do not include peer or professional review procedures. With the understanding that these bills do not include this review mechanism, your Committee recommends adoption of Resolution #8.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed regarding peer review. Dr. Ramsay moved that this be amended that we would disagree with any bill presented that includes compulsory peer review. Following further discussion, it was moved that this amendment read: "We agree with the principle of Medicredit, however we would disagree with any bill presented that includes a compulsory peer review system." This amendment was approved. This section of the Reference Committee report was then approved as amended.

Your Reference Committee considered Resolution #9 presented by the Omaha-Douglas County Medical Society, as follows:

> WHEREAS, the American pluralistic system of delivery of medical care is under constant attack by those who would make it a monolithic system under government control; and
>
> WHEREAS, the American system has been falsely described as being a "cottage industry" or an "unsystem"; and
>
> WHEREAS, most of the failures of our present systems are due to influences which are not under the control of physicians — such as political, social, economic, and educational factors; therefore be it
>
> RESOLVED, that the Nebraska State Medical Association reaffirm the following principles as a pre-condition to the delivery of quality medical care:
>
> 1. Voluntaryism as the basis of self-discipline and self-evaluation.
> 2. Freedom of choice for patient and physician.
> 3. Right of private practice.
> 4. Non-interference by any third party (adherence to Sec. 1801, PL 89-97).
> 5. Right of physician to consummate a contractural agreement with patient for
>   a. Delivery of medical services, and
>   b. Receipt of a fee for the services rendered.

Your Reference Committee recommends adoption of this resolution with the observation regarding #4, that the very existence of PL-89-97 is interference by a third party, in spite of the statement in that bill that it is not to be construed as interfering with the relations between the physician and his patient.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Dr. Bosley gave an oral addendum report on the subject of a medical union. It was moved that this section of the Reference Committee report be tabled until the next session, and that this be printed for presentation at this next session. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #1 AS A WHOLE AS AMENDED.

This was approved by the House.

Reference Committee #3

Members of your Reference Committee #3 were Drs. H. R. Walker, Chairman; R. R. Andersen; and James Dunlap.

Your Reference Committee has studied the report of the Delegate to the A.M.A., as carried in the Handbook, as submitted by Dr. John R. Schenken, Delegate, and recommends approval of the report and calls attention to the recommendation of the Delegate regarding the Board of Trustees Council on Health Manpower (Report F) and his statement that the Nebraska State Medical Association should study Report F at once and make recommendations to the House of Delegates at the 1971 interim session.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. The Reference Committee was asked if they wished this referred to a specific committee of the Association for study, and Dr. Walker said it should be the committee on education. This section of the report was approved.

Your Reference Committee recommends approval of the Report of the Nebraska Medical Foundation as carried in the Handbook, and would call attention to the minimal contribution by physicians to this Foundation, the contribution being $2,309.50 by physicians in the State of Nebraska from April 1, 1970 to April 1, 1971, and would recommend a little soul searching to see if we should give a little better support to the Nebraska Medical Foundation.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the Report of the Sub-Committee on Athletic Injuries as carried in the Handbook as submitted by the Chairman of this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of Resolution #3 submitted by the Omaha-Douglas County Medical Society, as follows:

> WHEREAS the Nebraska State Medical Association has, in the past, attempted to cooperate closely with the State Welfare Division; and
>
> WHEREAS numerous problems are developing concerning payment for physicians' services under welfare; and
>
> WHEREAS the forms are long and take a great deal of time for completion and are frequently returned because of clerical errors; and
>
> WHEREAS the cost of the operation of a physician's office and his other costs have continued to rise; and
>
> WHEREAS there has been no satisfactory adjustment whatsoever in the payment for patients in the Department of Welfare.
>
> BE IT THEREFORE RESOLVED that the Speaker of the House of Delegates appoint a special Ad-Hoc Committee to study the problems of the delivery of health care for welfare patients and the payment thereof; and
>
> BE IT FURTHER RESOLVED that this Ad-Hoc Committee report to the House of Delegates at its next meeting.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the requests for Life Membership for the following physicians: Drs. R. P. Carroll, Laurel; K. F. McDermott, Grand Island; J. H. Barthell, Lincoln; Robert C. Olney, Lincoln; G. E. Underwood, Lincoln; Harley E. Anderson, Omaha; and Arthur C. Brown, Omaha.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee studied Resolution #12 as submitted by the Buffalo County Medical Society which concerns Legislative Bill 712 creating a loan fund with a cancellation provision for medical students who would practice in these areas. The resolution reads as follows:

> WHEREAS, the Nebraska State Medical Association recognizes the shortage of physicians in certain urban and rural areas in the State of Nebraska, and
>
> WHEREAS, Legislative Bill 712 as modified before the Nebraska State Legislature creates a loan fund with a cancellation provision for medical students who would practice in these areas,
>
> THEREFORE BE IT RESOLVED, that the Nebraska State Medical Association endorse L.B. 712 and encourage its passage.

After reading the content of LB 712, your Reference Committee would not recommend endorsement of LB 712 as it now reads, but would approve of the concept. Your Reference Committee recommends that the Medical Service Committee work with the University of Nebraska College of Medicine and the Creighton University School of Medicine to formulate a more satisfactory bill.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded, and there was discussion regarding the forgiveness clause in this bill. It was moved to amend this section of the report by adding after the word, "concept" at the end of the second sentence, the following: "of striving to increase the number of physicians practicing in the State of Nebraska." This amendment was approved, and this section of the Reference Committee report was approved as amended.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #3 AS A WHOLE AS AMENDED.

This was approved.

Reference Committee #4

Members of your Reference Committee #4 were Drs. P. B. Olsson, Chairman; Wm. J. Chleborad; and Marvin Holsclaw.

Your Reference Committee recommends approval of the report of the Geriatrics Committee as carried in the Handbook as submitted by the Chairman of this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered Resolution #1 on surgical fees introduced by the Saline County Medical Society and Resolution #6 introduced by Holt-Northwest County Medical Society on pre and post operative charges. These resolutions read as follows:

Resolution #1

WHEREAS medical costs have risen at an alarming rate in the past ten years and much public support is being expressed for outside control of medicine, we physicians therefore have an obligation to revise and re-evaluate or correct old methods that are found to be inconsistent with current medical concepts, and,

WHEREAS there exists some confusion in the method of determining fair and usual and reasonable and customary fees for surgery if more than one doctor is involved; and this tends to confuse patients, insurance companies and physicians and under the present system patients often pay duplicate fees to their primary physicians for pre-operative and post-operative care not carried out by their surgeons, and

WHEREAS it is occasionally, not feasible for the attending surgeon to provide all aspects of pre-operative and post-operative care himself and that the current schedule does not differentiate between these various levels of surgical care, and includes pre-operative and post-operative surgical fees as one unit (herein called "total surgical fee") for routine, uncomplicated, surgical fees as presently constructed by the American College of Surgeons, and

THEREFORE BE IT RESOLVED that the Nebraska State Medical Association recognize that the usual and customary and fair and reasonable surgical fees be apportioned in terms of pre-operative, operative and post-operative care with the diagnosis and pre-operative care being ten per cent of the total surgical fee; the operative procedure being seventy percent of the total surgical fee; and the post-operative care being twenty percent of the total surgical fee.

Noting further that:

WHEREAS the first assistants fee has already been set at twenty percent of the total surgical fee (in addition to the total surgical fee) and this seems to be adequate, therefore, no special change is necessary in the surgical assistants arrangement.

THEREFORE it is recognized that all surgical billings should include a statement as to: "type of surgical procedure followed by one of the following examples:

a) total surgical care — (in the event that the surgeon provides the entire care in the case including all pre-operative and post-operative care, or:

b) total surgical care less ten percent for pre-operative care and less twenty percent of post-operative care so that the patient, insurance carriers, and all parties concerned will recognize the exact and true meaning of the usual and customary billing for the surgery, and that itemization of the specific levels of surgical care rendered will eventually result in better relationships for all concerned.

Resolution #6

WHEREAS surgical fees in the State of Nebraska commonly include pre-operative services, operative procedures and post-operative services and as such are not itemized; and

WHEREAS the charges for pre-surgical care, post-surgical care, the operative procedure, and the travel expense incurred by surgeons are handled and billed for in various and sundry ways; and

WHEREAS this process tends to cause confusion, problems, and distrust among physicians, patients, and third-party payors; and

WHEREAS the public tends to distrust and be suspicious of that which they cannot understand;

THEREFORE BE IT RESOLVED that the House of Delegates direct the Relative Value Study Committee to establish Relative Values for the following:

1. Pre-operative Care
2. The Surgical Procedure
3. Post-operative Care

and make recommendations to the next meeting of the House of Delegates: and

BE IT FURTHER RESOLVED that involved physicians be instructed to identify the element of care for which they are billing, as well as any travel expenses incurred.

It was felt that due to the similarity of these resolutions that both be combined into Resolution #6, as amended. In the first RESOLVED, delete "2. The Surgical Procedure." This Resolution #6 as amended is recommended for approval.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee then considered Resolution #2 introduced by the Omaha-Douglas County Medical Society referring to a uniform operative and sterilization permit, as follows:

WHEREAS, there are no uniform operative and sterilization permits in the State of Nebraska, and

WHEREAS, review of many of these reveals potentially serious inadequacies, and

WHEREAS, the problem of malpractice cases are increasing in part due to inadequate permits;

THEREFORE BE IT RESOLVED, that the Nebraska State Medical Association study this problem and recommend a uniform operative and sterilization permit to be used by all the members of the Association and their respective hospitals.

Your Reference Committee recommends approval of Resolution #2.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee then considered Resolution #5 introduced by the Dodge County Medical Society referring to county hospital boards and agreed with the intent of the resolution. In addition, your Reference Committee recommends that such legislation should also cover all other hospital governing boards where applicable and permitted by law. The resolution reads as follows:

WHEREAS, LB 23-343.01 of the State of Nebraska states that the County Board of Supervisors of the county shall appoint a board of trustees for the county hospital consisting of three or five members and that not over one member of said board of trustees shall be from the city in which such facility is located; and

WHEREAS, LB 23-343, by its present restrictive clauses, places serious limitations on the 23 county hospitals in the State of Nebraska and does not allow the freedom of management, purpose and direction afforded private hospitals through larger and more diversified boards of directors. Nor does it allow for board representation by population distribution in said county in which the hospital is located; and

WHEREAS, there are numerous references made in the revised standards of the Joint Commission on Accreditation of Hospitals to the effect that medical staffs should be afforded and be willing to assume a full partnership with the governing board in affairs of the hospital; and

WHEREAS, a report of the A.M.A.'s Council on Medical Service adopted in June by the House of Delegates stipulated that: "Where legally permissible, physicians actively practicing in the community who are voting members of the medical staff shall be eligible for and should be accorded membership on hospital governing bodies and their action committees with full voting privileges in the same manner as are other knowledgeable and effective individuals."

THEREFORE BE IT RESOLVED, that the House of Delegates of the N.S.M.A. instruct the Medical Service Committee to seek support and cooperation of the Nebraska Hospital Association and the County Board of Supervisors Association; and

BE IT FURTHER RESOLVED, that the N.S.M.A. seek to introduce a new bill, or amend, or revise the present LB 23-343, at the 1972 Legislative Session of the State of Nebraska in order that its County Hospital Boards of Directors be updated to meet new standards and be allowed a broader and more equitable representation, and include at least one physician to be a member of the hospital Board of Directors.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #4 AS A WHOLE.

This was approved.

Reference Committee #5

Members of your Reference Committee #5 were Drs. H. A. McConahay, Chairman; Richard Egan; and R. C. Weldon.

Your Reference Committee recommends the approval of the report of the Blood and Blood Products Committee as carried in the Handbook as submitted by the Chairman of this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the report of the Constitution and By-Laws Committee as carried in the Handbook as submitted by the Chairman of this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the report of the Emergency Medical Service Committee as carried in the Handbook as submitted by the Chairman of this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the report of the Mental Health and Mental Retardation Committee as carried in the Handbook as submitted by the Chairman of this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of Resolution #10 as submitted by the Omaha-Douglas County Medical Society and further recommends this resolution be referred to the Public Relations Committee for implementation. The resolution reads as follows:

> WHEREAS, the image of the medical profession in the eyes of the public and the Congress appears to be at an unacceptably low level;
>
> WHEREAS, the respect and admiration of individual patients for "my doctor" is at an all-time high; and
>
> WHEREAS, the only effective public information program the medical profession ever carried out was based on patients' communications to politicians; therefore be it
>
> RESOLVED, that the Nebraska State Medical Association embark upon a public information program whereby patients will be stimulated to inform the politicians of their (patients). opinions on the private practice of medicine and "my doctor."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Relative to the recommendation of the Board of Councilors to set up a study committee to review all the matters relating to a physician assistant, our Committee recommends that the President implement the apparent intentions of the Board of Councilors by appointing an ad-hoc committee to study the question of physician assistants. The committee should be responsible for, but not limited to, consideration of issues such as:

a. The necessity for physician assistants in Nebraska.

b. The willingness of the membership to use physician assistants.

c. Guidelines for their function.

d. The possibility of their licensure or certification.

e. Effect on legal responsibility of the physician.

f. Methods of remuneration.

This ad-hoc committee should submit a definitive report at the Fall Session of the House of Delegates.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and following discussion, it was moved to amend this by adding an additional item:

g. Definition of physician assistant.

This amendment was approved, and this section of the report as amended was approved.

Your Reference Committee also approved of the recommendation made by Dr. Gilligan concerning the appointment of a representative from the Association to meet with an inter-professional group to study the matter of malpractice. Because of Dr. Gilligan's vast experience in this area, the Committee recommends that Dr. Gilligan be recommended to serve as our representative to this group.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #5 AS A WHOLE AS AMENDED.

This was approved.

Dr. McFadden informed the House that Reference Committee #2 was not ready to report at this time.

Dr. Nye requested that a progress report be made on the Nebraska-South Dakota Regional Medical Program on Wednesday.

There being no further business, the House was adjourned until Wednesday morning.

House of Delegates

Third Session

The third session of the House of Delegates was held April 28, 1971. The meeting was called to order by the Vice Speaker, Dr. McFadden.

The report of the Credentials Committee showed that 49 delegates were present.

The Vice Speaker called for consideration of the printed minutes of the second session, and these were approved.

Oral reports were called for and the following were presented:

Dr. Robert Kugel, Dean, University of Nebraska College of Medicine

Dr. Joseph Holthaus, Dean, Creighton University School of Medicine

Mrs. John C. Filkins, Immediate Past President, Woman's Auxiliary to the N.S.M.A.

Dr. Harold S. Morgan, Coordinator, Nebraska-South Dakota Regional Medical Program

Dr. McFadden called on Dr. Bosley, Chairman of Reference Committee #1, for the report of that Reference Committee on the section of their report regarding a medical union which had been tabled. Dr. Bosley gave the following report:

Your Reference Committee #1 also considered Recommendation #3 of the Board of Councilors. Although unions have an important place in our society, your Committee does not believe that formation of a medical union is consistent with the high aims and purposes of medicine. While we recognize the desperate situation which prompts the thought, and surely we do need to develop a position of power in bargaining with third party elements who would erode and eventually destroy the still firm relationship between the physician and his patient, we believe that physicians who are still free to make choices, can and should bind themselves into a society so strong that its officers, properly authorized, can speak for them in situations where firm negotiation becomes necessary. We believe that intelligent men, fully informed and free to act, will follow precedents laid down many years ago. Benjamin Franklin's words are still appropriate: "We must all hang together, or assuredly we shall all hang separately." We can no longer stand like Charlie Brown on the pitcher's mound crying, "How can we lose when we are so sincere?".

Your Reference Committee recommends that the Policy Committee continue to be designated the official representative of the Nebraska State Medical Association in all situations which require negotiation, such as fee schedules or fee structure, policy procedures, or any other affair in which a third party relationship exists. Your Committee believes that if a union were to be formed, agreements reached by the Policy Committee in negotiation procedures would have to be submitted to a vote of the general membership of the Nebraska State Medical Association and that the vote of the majority of the membership would be binding on all members of the Association. Your Committee further believes that the Policy Committee would have to devise and propose measures of sanction and discipline that would be imposed upon recalcitrant members who do not abide by this majority decision. To repeat, your Reference Committee does not recommend that this Association form itself into a medical union, and recommends that portion of the report of the Board of Councilors dealing with this subject not be accepted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed. Dr. Latenser stated that he thought this report could be simplified and that he would like to offer a substitute report. This was approved by the House and Dr. Latenser moved that the House of Delegates not endorse the Board of Councilors report on unions for the basic reason that we are a professional organization. This was seconded, and this report as amended was approved.

Dr. Bosley asked the House of Delegates to refer back to that section of his Reference Committee report presented at the second session concerning the changing of the name of this organization to Nebraska Medical Society. He called for reconsideration of this section of his report, and this was approved. Dr. Bosley then moved that the last sentence of this section of the report be deleted, making the name of this organization Nebraska Medical Association. This was seconded and approved.

The report of Reference Committee #2 was called for and the following was presented:

Reference Committee #2

Members of your Reference Committee #2 were Drs. C. N. Sorensen, Chairman; John Coe; C. J. Cornelius; and F. H. Hathaway.

Your Reference Committee first considered the Report of the Ad-Hoc Committee on Peer Review as printed in the Handbook as submitted by the Chairman of this Committee. The Reference Committee heard extensive testimony concerning peer review at its two hearings. As a result of the hearings, your Reference Committee recommends the following modified proposal for peer review:

The Association's Ad-Hoc Committee on Peer Review, appointed by the Speaker of the House of Delegates in October, 1970, has held several meetings. The Committee presents the following report as a mechanism for establishment of a peer review procedure for the State of Nebraska under the auspices of the Nebraska State Medical Association.

1. That a peer review mechanism be established in the State of Nebraska.

2. The scope of peer review shall encompass all services performed by a physician or under the direction of a physician. Peer review is the review by fellow physicians to determine the appropriateness of, and adequacy of, medical care.

3. The Councilor District Peer Review Committee will review any case brought to the Committee by a physician or a patient. Third party carriers may submit a case for review after they have exhausted their own ability to resolve the case and submit their reasons for seeking assistance.

4. The N.S.M.A. should establish, as a standing committee of the N.S.M.A, a State Peer Review Committee for Nebraska.

   a. Functions:

      1. To act as a State Peer Review Committee to which decisions of the Councilor District Peer Review Committee may be appealed, either by the physician, the patient or the third party carrier.

      2. To aid in the establishment of, and coordination of, the Councilor District Peer Review Committees.

      3. To establish, with consultation of existing Peer Review Committees, the mechanisms of gathering information, the recording, and the analysis of cases reviewed so that there can be a uniform method of peer review activities in Nebraska.

      4. To advise all interested parties of the mechanisms established for initiating peer review in Nebraska.

      5. To educate the physicians of Nebraska as to the function and meaning of peer review as well as to disseminate medically useful information obtained from such peer review activities.

      6. To establish at their discretion an advisory committee of specialists as required to assist the State Peer Review Committee and Councilor District Peer Review Committees in completing proper review of a case. The details of this Committee are left to the dis-

cretion of the State Peer Review Committee.

b. The State Peer Review Committee shall consist of fourteen members who are members of the Nebraska State Medical Association and actively engaged in the private practice of medicine, appointed by the President of the Nebraska State Medical Association. Membership shall consist of:

    1. Four members who are engaged in General Practice and at least one of whom is a member of the American Academy of General Practice or certified by the Board of Family Practice.
    2. One urologist.
    3. One orthopedic surgeon.
    4. One general surgeon.
    5. One internist.
    6. One obstetrician-gynecologist.
    7. One pathologist.
    8. One radiologist.
    9. One psychiatrist.
    10. One anesthesiologist.
    11. One pediatrician.

All of the members listed above, with the exception of those in Category #1, shall be certified by their respective Specialty Boards. The Committee members should be selected on the basis of geographical distribution to be representative of all areas in Nebraska. The Committee will elect its own chairman. No member may be appointed to any of the Peer Review Committees in Nebraska who is serving as a medical director of a third party carrier or serving as a member of its Board of Directors. No member of any Peer Review Committee should sit in review of his own case.

c. The term of service on the Committee shall be three years with the terms to be staggered as follows for the initial Committee:

    1. Five members, one year.
    2. Five members, two years.
    3. Four members, three years.
    4. No physician may serve continuously in excess of six years.

5. Councilor District Peer Review Committees will be established throughout Nebraska with the assistance and coordination of the State Peer Review Committee. Every case will initially be reviewed in the district where the physician who rendered the service resides.

a. The Councilor District Peer Review Committees shall be established on the basis of N.S.M.A. Councilor Districts. The State Peer Review Committee shall contact the N.S.M.A. Councilors for the establishment of the Councilor District Peer Review Committees as that group should bear the responsibility for organization at the local level. Should a Councilor District Peer Review Committee not be implemented in ample time as judged by the State Peer Review Committee, the State Peer Review Committee would have the ability to merge adjacent districts for the purpose of peer review. Councilor Districts, or parts thereof, may merge for the purpose of peer review.

b. Councilor District Peer Review Committees will function utilizing the mechanisms established by the State Peer Review Committee. All peer review activities will first be reviewed by the Councilor District Peer Review Committee. Any decision of the Councilor District Peer Review Committee may be appealed to the State Peer Review Committee by the physician or the patient or the third party carrier. The reviews made by the Councilor District Peer Review Committee will be reported to the State Peer Review Committee in a manner prescribed by the State Peer Review Committee.

c. The number of members, their appointment and their term of office shall be determined by the physicians in each Councilor District.

6. In order for the Councilor District and State Peer Review Committees to function in a coordinated fashion, it will be necessary to use Headquarters Staff personnel.

a. Functions expected of Headquarters Staff personnel shall include:

    1. To receive all requests for assistance in peer review in the State of Nebraska.
    2. To collect all information necessary for the review of the case prior to the meeting of the Councilor District Peer Review Committee.
    3. To inform the Councilor District Peer Review Committee that will review the case, that the case will be reviewed at its next meeting.
    4. To be present at the meeting of the Councilor District Peer Review Committee to record its findings and actions using a format established and approved by the State Peer Review Committee.
    5. To collate all actions by Councilor District Peer Review Committees in a manner prescribed by the State Peer Review Committee so that they may be reviewed and analyzed by that Committee.
    6. To assist the State Peer Review Committee in informing the Councilor District Peer Review Committee of the knowledge gained in reviewing cases, thereby educating physicians in Nebraska as to problem areas, acceptable standards of practice, etc.
    7. To prepare an annual budget to be submitted to the N.S.M.A. by the State Peer Review Committee in consultation with the Councilor District Peer Review Committees.

7. Since the function of peer review in Nebraska will encompass the reviewing of cases in which there is dispute over fees, the Constitution and By-

Laws Committee should be instructed to make such changes as required to remove that function from the Council on Professional Ethics.

8. The activities of all the Peer Review Committees shall have no disciplinary function. If cases are reviewed in which it appears disciplinary actions should be considered, these would be referred to the Council on Professional Ethics for their consideration. In addition, the State or Councilor District Peer Review Committees will refer to the appropriate standing committees of the N.S.M.A., any other matters that it encounters that are outside the purview of peer review.

9. It is the sense of your Reference Committee that the development of workable peer review must be approached with a flexible attitude, subject to revision as experience teaches us that changes are indicated.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF THE AD-HOC COMMITTEE ON PEER REVIEW AS AMENDED.

This was seconded and discussion followed. The motion was made by Dr. Westbrook that in Item #3, the last sentence be changed to: "The Medical Director of the third party carriers may submit a case for review after he has exhausted his own ability to resolve the case and submit his reasons for seeking assistance." This was approved by the House.

A motion was made by Dr. Dunlap that the last sentence of Item #5 be amended to read: "Every case will initially be reviewed in the district where the physician who rendered the service resided when he performed the service."

This was approved by the House.

The Chair called for action on the amended section of Reference Committee #2 report, and this was approved as amended unanimously.

Your Reference Committee considered the Special Report of Dr. Nye and in view of the revisions of the Ad-Hoc Committee Report, believe that there is no action indicated.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved by the House.

Your Reference Committee considered Item #5 of the Constitution and By-Laws Committee Report, and we approve this section of that Committee report as printed.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered Paragraph #1 of the Policy Committee Report as carried in the Handbook, and we approve of this section of the Policy Committee Report.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered Resolution #7 as submitted by the Lancaster County Medical Society, as follows:

> WHEREAS, present established and adequate methods and procedures for review and guidance of medical ethics and ability are generally acceptable and effective, and
>
> WHEREAS, an additional reviewing concept such as the proposed Professional Services Review Organization (PSRO) is superfluous and therefore unnecessary, and
>
> WHEREAS, the PSRO is created solely to impose restrictions upon the cost of patient care and consequently upon the quality of patient care, and
>
> WHEREAS, the PSRO as a concept is discriminatory toward a single profession, and is unprofessional in attitude and will become a divisive instrument,
>
> THEREFORE BE IT RESOLVED, that the Nebraska State Medical Association formally disavow sanction of the shackling and coercive proposed "peer review system and make known its decision to the national parent body.

Your Reference Committee wishes to modify the last paragraph to read:

> "THEREFORE BE IT RESOLVED, that the Nebraska State Medical Association formally disavow sanction of the shackling and coercive proposed "peer Review" system which would result from Federal Government enacted legislation creating compulsory peer review."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS RESOLUTION AS MODIFIED.

This was approved.

Your Reference Committee considered Resolution #11 as submitted by the Omaha-Douglas County Medical Society and it was approved. The resolution reads as follows:

> WHEREAS, Peer Review on a voluntary basis has been a major part of American organized medicine's program for the past sixty years to promote high quality medical care; and
>
> WHEREAS, this voluntary system has formed the foundation of world leadership in medical education as well as the delivery of medical services; and
>
> WHEREAS, a compulsory statutory federally controlled peer review mechanism was added to the Medicredit Bill (HR 18567) by the A.M.A., placing American physicians in the untenable and impossible position of being the primary conservators of federal expenditures for federally financed medical care; and
>
> WHEREAS, the provisions of the Peer Review Organization (AMA-PRO) or the modified AMA-PRO, known as the Peer Standards Review Organization (Bennett Amendment), makes the Secretary of H.E.W. a virtual czar over the legal and professional activities of physicians (See Sec. 2102 through 2106 of AMA-sponsored and endorsed HR 18567, 91st Congress, 2nd Session (Fulton-Broyhill Medicredit Bill); and
>
> WHEREAS, when the AMA leadership failed to withdraw PRO as part of the proposed Medicredit Bill when requested to do so by Nebraska State Medical Association leadership, Senator Carl T. Curtis of Nebraska noted its potential evil, he moved its deletion from the Senate Finance Committee's deliberation (1970). The motion failed.

THEREFORE BE IT RESOLVED, that the Nebraska State Medical Association reaffirm the principle of voluntaryism as it relates to medical profession self-evaluation and self-discipline; and be it further

RESOLVED, that the Nebraska State Medical Association oppose any mechanism of peer review which divorces it from the operation and control of the medical profession; and be it further

RESOLVED, that the Nebraska State Medical Association oppose the A.M.A. attempt to reincorporate **peer review as a compulsory statutory federally controlled mechanism** in May, 1971, as has been announced by the Trustees in the "A.M.A. News"; and be it further

RESOLVED, that a copy of this resolution be sent to each member of the A.M.A. Board of Trustees and the A.M.A. House of Delegates and to each state medical Society.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee was also asked to consider the request from the Board of Councilors regarding the term of office on peer review committees and this has been taken care of in our modification of the Ad-Hoc Committee Report.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #2 AS A WHOLE AS AMENDED.

This was approved by the House.

Dr. McFadden called for the Report of the Nominating Committee, and the following slate of officers was presented to the House of Delegates:

President-Elect — Horace V. Munger, Lincoln

Speaker, House of Delegates — Wm. Nutzman, Kearney

Vice Speaker, House of Delegates — Harry McFadden, Omaha

Delegate to A.M.A. — Earl F. Leininger, McCook

Alternate Delegate to A.M.A. — Roger D. Mason, McCook

Delegate, North Central Conference — R. F. Sievers, Blair

Councilors:

9th District — Hiram Walker, Kearney
10th District — Chas. Landgraf, Hastings
11th District — B. F. Claussen, North Platte
12th District — A. J. Alderman, Chadron

The House approved the slate of officers as presented.

There was discussion on the article which appeared in the newspaper following the House action on LB 712. Dr. Tamisiea said he thought it should be made clear to the Legislature that the N.S.M.A. approved of the concept of this bill as the Association is also interested in increasing the number of physicians in the State of Nebraska; however, we did not approve of the bill as it was written. The motion was made that the State Legislators be so notified, and this was approved.

The Lancaster County Medical Society extended an invitation to hold the 1972 Annual Session in Lincoln, Nebraska, and this was approved.

The Vice Speaker asked that a letter of thanks be sent to the Omaha-Douglas County Medical Society.

There being no further business, the House was adjourned.

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Medicinews . . .

Pacemakers

A committee of the Society of Automotive Engineers has begun laboratory studies of the sensitivity of heart pacemakers to electromagnetic radiation interference, Food and Drug Administration Commissioner Dr. Charles C. Edwards announced.

Studies of the electronic devices, which sustain near-normal heart beats and often life in an estimated 50,000 Americans, are being conducted as a public service by members of the SAE Electromagnetic Compatability Committee.

The committee is working under an informal agreement with the FDA Bureau of Radiological Health and has arranged for the use of industrial laboratories without cost to the government. Manufacturers have furnished the Bureau with pacemakers for the research.

Interference sensitivities of pacemakers will be examined in terms of performance characteristics over a wide range of radiation frequencies. Information obtained will be used by the investigators in developing low-cost test procedures which manufacturers may employ in designing interference-proof pacemakers.

Electromagnetic radiation interference has been associated with one of two types of pacemakers — the widely-used demand or synchronous type that acts only in instances of heart malfunction. Interference with this type of pacemaker has been caused by radiation from a variety of equipment, including medical diathermy and electrocautery units, radio transmitters, radar scanners, gasoline engine ignition systems, electric shavers and food mixers, television receivers, and microwave ovens.

Information about pacemakers and action taken on the interference problem is contained in a new Bureau of Radiological Health report, "Electromagnetic Radiation Interference With Cardiac Pacemakers." The publication may be purchased for 45 cents a copy from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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The Law . . .

Senate debates draft extension

Debate continues in the Senate on H.R. 6531, which would amend and extend the Military Selective Service Act. Two amendments affecting medicine have been adopted. One would require that in the drafting of physicians appropriate consideration be given to the respective needs of the Armed Forces and the civilian population. It would also require the Secretaries of Defense and HEW to conduct a joint study of practicable means of reducing dependence on medical personnel of the Armed Forces in providing medical care. In this joint study, special consideration would be given to the feasibility of providing medical care for military personnel and their dependents through contracts with clinics, hospitals, and individual members of the medical profession. The results of the study, together with any recommendations, would be submitted to the President and the Congress within six months.

Councilor Districts and Counties

First District: Councilor: Thomas J. Gurnett, Omaha. Counties: Douglas, Sarpy.
Second District: Councilor: C. D. Bell, Lincoln. Counties: Lancaster, Otoe, Cass.
Third District: Councilor: H. C. Stewart. Pawnee City. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
Fourth District: Councilor: Robert B. Benthack, Wayne. Counties: Knox, Cedar, Dixon, Dakota, Antelope, Pierce, Thurston, Madison, Stanton, Cuming, Wayne.
Fifth District: Councilor: Robert Sorenson, Fremont. Counties: Burt, Washington, Dodge, Platte, Colfax, Boone, Nance, Merrick.
Sixth District: Councilor: Houtz Steenburg, Aurora. Counties: Saunders, Butler, Polk, Seward, York, Hamilton.
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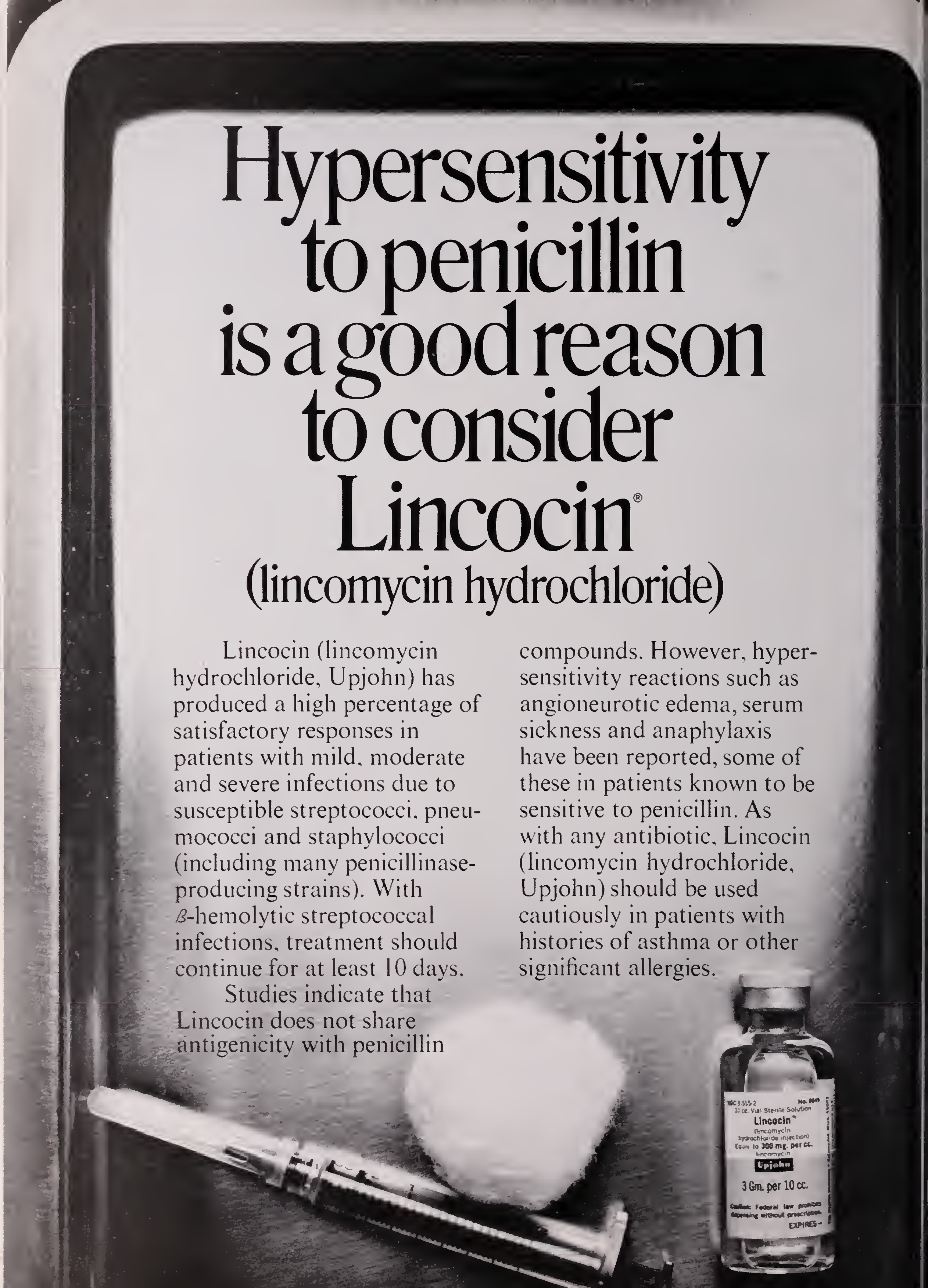

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and Efudex® (fluorouracil) 5% cream can resolve it.

Call it actinic, solar or senile keratoses, many regard it as "precancerous."[1,2]

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,[3,4] offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these mutliple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.[5] Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.[6]

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.[5] The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.[6]

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. **2.** Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. **3.** Belisario, J. C.: *Cutis*, *6*:293, 1970. **4.** Sams, W. M.: *Arch. Derm.*, *97*:14, 1968. **5.** Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. **6.** Williams, A. C., and Klein, E.: *Cancer*, *25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

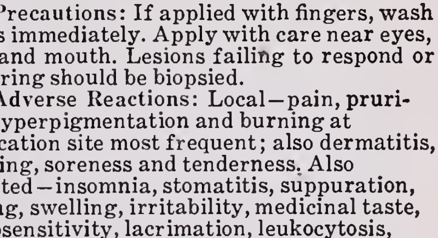
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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Interim education bill passes house

By a vote of 299-0, the House has passed H.R. 7736, which provides a one-year extension of the present loan and scholarship provisions of the Health Professions Educational Assistance Act.

"Congratulations, Mr. Thursby! What you have is completely unheard of in the annals of medicine."

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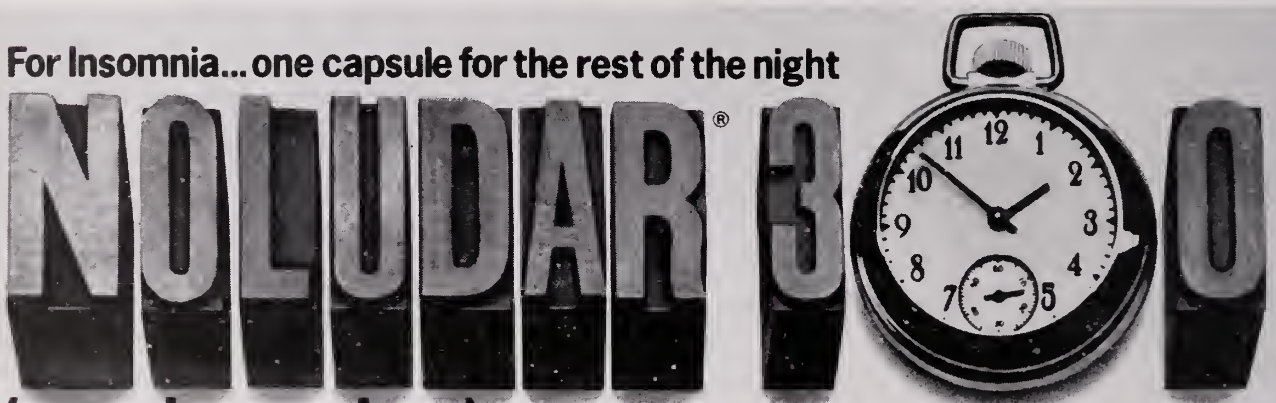

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Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

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THE NEBRASKA STATE MEDICAL JOURNAL

WHO WAS RIGHT?

The surgeon was conducting a series to evaluate a machine that would anesthetize a leg by electrically produced refrigeration. He was choosing his cases at random by alternating them, so that they went machine, general or spinal, machine, general or spinal, ad infinitum or centum. He said this patient needs an amputation, and he will not tolerate a general or spinal, and it is *not* his turn to be put on the machine; what do you suggest? I said, for heaven's sake, put him on the machine and alternate from then on. He replied, I will never believe anything you write. So we called the next man on our service, and he said what I had said. And the surgeon looked at us coldly and said I will never believe anything your whole department publishes. So I blocked the leg and he removed it.

In a famous novel, the medical center sends a doctor to a little island where an epidemic has broken out; it is an excellent opportunity to test a new drug. So he alternates cases, giving it to one and not to the next, while children die all around him. The drug is harmless, and he stops the experiment and gives it to everybody. And when he gets back, they tell him that while he *may* have saved a *few* lives, the drug is now untested, and cannot be used in later epidemics, and *many* may now die.

Was the first patient's life more important than the ice machine? Was the surgeon right? Had we put the patient on the machine, would the series have been invalidated?

I believe the series would have been ruined, and I think the surgeon was right.

—F.C.

CAB DRIVER

Once, long ago, when I was an intern, a staff physician whose intelligence and curiosity I respected came up with a series of cab drivers who became delirious, postoperatively, I think. And all of them (there may have been six) sat up in bed at the height of their mind-wandering, and began to seem to drive their taxis. Now this was in the days of stick-shifts (I think taxis still have them) and you could see what the drivers thought they were doing; and the significance of the small series was this.

When they backed up, they died.

—F.C.

THE DOCTOR SHORTAGE

In 1945 there were 77 medical schools in the US, with a population of some 140 million. In 1970 the number of schools rose to 103, and the population was 202 million. The number of people per school during those years went from 1.82 million to 1.96 million.

But in 1950 we had 151 million people and 233 thousand physicians; and in 1970 there were 202 million people and 334 thousand physicians. The number of people per doctor *decreased* (from 648 to 605) by 6.6 percent, or the number of physicians *rose* (from 0.154 percent to 0.165 percent of the population) by 7 percent in proportion to the population.

To put it another way, the total US population grew by 33 percent, while the number of physicians increased by 43 percent.

That's not bad.

—F.C.

THE GHOST AND THE ENVELOPE

Time was when, good or bad, a man chose his own words. But the ghost writer is with us now, and to stay. This may be efficient; it is surely politic. And since the public speaker's only contribution is to read aloud what someone else has written, we are now presented with the curiosity of *seeing, in books,* famous words ascribed to famous people who did not write the words, and this makes no sense.

Lincoln may have written his Gettysburg Address on the back of an envelope, and there are at least six of these envelopes around. When Mrs. Einstein was conducted through an astronomical observatory, she said, "My husband does this on the back of an envelope." The envelope is an unappreciated instrument, and is often more valuable than the letter it contains. Anyway, using an envelope over again is a kind of recycling, which is another argument for this technique in antipollution days.

Once, and I have told this story so many times that it may be true, a public figure delivered a speech he had neither written nor seen before, and read a joke in the middle of the speech, and the joke was funny and new to him, and he broke up into dead giveaway guffaws while giving his own speech. They told a fellow what *prose* means and he said, "Why I've been talking prose all my life and I didn't know it."

"Just tell us in your own words," the lawyer advised, and the witness said, "I always talk in my own words."

When we run out of envelopes, we write on tongue depressors.

—F.C.

ON BEING CALLED DOCTOR

One of the nice things about being a doctor, I suppose, is that you are always called by your title, as a mark of respect. And ladies open doors for you. Of course, priests are called fathers; and even retired judges, governors, and presidents retain their titles as long as they live.

The medical graduate in England is a bachelor of medicine, but his training is the same as ours. With postgraduate work, he becomes a doctor, but when he is a surgeon, he wants to be called mister all over again.

Holders of political office, appointed or elected, are called such silly things as honorable or even the right honorable, all of which suggests that the rest of us are neither. It is fun to listen to a United Nations speaker hurry through *the-distinguished-representative* at the beginning of every speech; our congressmen address each other in similar fashion. Protocol demands that dignitaries be greeted properly and uniquely, and we have learned to say your excellency or your highness or your majesty. When you are up before a judge, you must remember to call him your honor.

A Letter-to-the-Editor usually begins with *Sir*.

—F.C.

YOU WASH

Once when I could afford it, I sat in a fashionable restaurant and caught sight of a waitress methodically wiping each dish on a stack of clean plates and transferring all her wiped dishes to another pile. I squirmed in my seat, seeing that I had in front of me plates that had been similarly dried, and I knew that the bacterial and viral population of the plates increased dangerously as she continued to perform her foolish task.

Plates will air-dry at room temperature, and the drying time can be shortened if they are exposed to heat. But wiping each plate, and with the same towel, subjects them to contamination from the wiper's hand, from the towel itself, and surely from all plates previously dried by the towel. Drying in the home and in restaurants is both dangerous and needless. It is an easy way to inflict what is sometimes called food poisoning on restaurant patrons and on family members. There are mechanical dish washers, of course, and there are drying racks, but if I am offered the wash-or-wipe choice, I'll always say, "You wash."

But I won't wipe.

—F.C.

Wound Dehiscence – A Study of This Surgical Complication with a Review Of 42 Cases

CHARLES W. McLAUGHLIN, JR., M.D.
and
JOHN D. COE, M.D.

WOUND disruption is the most serious of all wound complications and, regardless of type of closure, will always remain with us as an occasional surgical complication.

A review of our experience in private practice during the past twenty years indicates that we have observed this complication in 42 instances in 14,300 surgical procedures. (Table 1). Twenty-nine of these were in men, nine were in women, and four were under the age of three years.

The highest incidence of dehiscence was in the decade of sixty to seventy but it was a frequent complication in subsequent decades. (Table 2). Biliary and pancreatic disease were the most common conditions followed by wound dehiscence, but cholecystectomy was the most common upper abdominal procedure in our entire series. Operations upon the colon and rectum, whether carcinoma or diverticulitis, were second in frequency, followed by the stomach and duodenum, and then less common procedures.

No incision was spared the complication of dehiscence except the muscle splitting incision of McBurney. (Table 3). Our greatest number of dehiscences occurred in rectus muscle splitting incisions and, as anticipated, they were more common in the upper than in the lower abdomen. Four dehiscences occurred with subcostal incisions, and the midline incision produced almost 15 percent of our total number of wound ruptures (Table 4).

Some type of intraperitoneal drain was employed in almost two thirds of our cases, but there were almost as many dehiscences in those in which the drain was brought out

Table 1
WOUND DEHISCENCE
SERIES 42 CASES — 14,300 GENERAL SURGICAL PROCEDURES
29 Male — 9 Female — 4 Babies
(3 male, 1 female)

AGE TIME COMPLICATION	No. Cases
Under 3 years	4
30 - 50 years	1
50 - 60 years	6
60 - 70 years	17
70 - 80 years	13
80 - 90 years	1

Table 2
WOUND DEHISCENCE — SERIES 42 CASES

CONDITIONS FOR WHICH OPERATION DONE	No. Cases
Biliary or pancreatic disease	14
Colon and rectum (diverticuli and cancer)	11
Stomach and duodenum	6
Gyn. procedures (abdominal)	3
Small bowel obstruction or laceration	4
Perforated appendicitis with peritonitis	2
Purpura (idiopathic)	2

Table 3
WOUND DEHISCENCE — SERIES 42 CASES

TYPE INCISION	No. Cases	
Rectus muscle splitting—		
Upper abdomen	16)	
Mid-abdomen	4)	69%
Lower abdomen	9)	
Paradmedian	3	
Subcostal	4	
Midline—		
upper abdomen	3)	
lower abdomen	3)	14.2%

Table 4
WOUND DEHISCENCE — SERIES 42 CASES

WERE DRAINS USED IN PROCEDURE	No. Cases	
None	15)	
Through stab wound	11)	42 Cases
Through incision	16)	
Operation considered clean	32)	42 Cases
Operation considered dirty	10)	

through a stab wound as when the drain was brought out through the incision. Only about 25 percent of the cases in which a dehiscence occurred were considered to be contaminated or dirty at the time of operation.

Dehiscence may occur with almost any type of closure, although it is rare with the classical through-and-through suture technique using heavy silk or wire. (Table 5). In our series, it is to be noted that wound rupture was seen most frequently in patients closed with interrupted catgut. This was our routine closure during 15 years of this 20 year period, and the figures must be considered in this light. Dehiscence was seen to occur when stays were used, with Tevdek, and when the interrupted silk technique was employed.

Classically, a dehiscence is observed in the interval between the fifth and the tenth postoperative days, with the peak on the seventh or eighth day. (Table 6). Precipitating factors may be totally absent, but we have noted that distention associated with a partial obstruction, vomiting, hiccough, or sudden straining, are all contributing factors (Table 7). The patient who does not do well or who may be partially obstructed, is the ideal candidate for a dehiscence.

Bloody wound discharge was noted in almost half of our cases immediately prior to visible dehiscence. (Table 8). Almost a like number dehisced suddenly, with the protruding bowel being the first thing seen without any preceding warning.

In a critically ill patient, wound packing is a method of handling wound rupture and may carry through a critically ill patient until secondary suture is possible. (Table 9). This can be readily accomplished in the patient's bed after the administration of a sedative. It is always amazing to see how easily extruded loops of bowel can be returned to the abdomen after a dehiscence. We have customarily packed such an incision with two inch vaginal gauze starting at the peritoneal level and laying it back and forth up to the level of the skin. The incision is then supported with strips of two inch flamed adhesive tape. When the packing is removed in one week, there is invariably a healthy granulating bed in the bottom of the wound. Approximately 50 to 60 percent of wounds so handled will develop a

Table 5

WOUND DEHISCENCE — SERIES 42 CASES

TYPE OF CLOSURE (fascia)	No. Cases
Interrupted catgut	29
Interrupted catgut plus through-and-through stays silk	8
Tevdek (Int.)	3
Silk (Int.)	2

Table 6

WOUND DEHISCENCE — SERIES 42 CASES

POSTOP. DAY OCCURRENCE	No. Cases
1 - 5th day	2
5 - 6 - 7th days	12
8 - 9 - 10th days	21
10 - 15th days	4
15 plus days	3

Table 7

WOUND DEHISCENCE — SERIES 42 CASES

PRECIPITATING FACTORS	No. Cases
Nothing known	20
Postop. coughing — severe	10
Distention — partial obstruction	5
Vomiting, hiccough	5
Straining (sudden).	2
On cortisone (heavy)	3

Table 8

WOUND DEHISCENCE — SERIES 42 CASES

PHYSICAL SIGNS — DEHISCENCE	No. Cases
Bloody wound drainage	19
Sudden protrusion bowel (no warning)	19
Bulging wound (with or without drainage)	2
Noted when skin sutures removed	2

Table 9

WOUND DEHISCENCE — SERIES 42 CASES

TYPE TREATMENT	No. Cases
Packing only	1
Immediate suture—	
Through-and-through wire	3
Through-and-through silk	23
Figure 8 (silk)	6
Through-and-through silk with int. catgut	8
Initial packing — subsequent suture	1

Table 10

WOUND DEHISCENCE —SERIES 42 CASES

RESULTS	No. Cases
Recovered	31
Died	11
Hernia—	
Known postop. hernia	6

hernia but this technique may save a critically ill patient's life.

Our standard method of handling a wound rupture is to employ general anesthesia and close it with through-and-through sutures of either silk or wire, the former being our preference.

Thirty-one of the 42 patients with wound rupture recovered, and 11 died. (Table 10). Those who succumbed did so in periods varying from the first day after the dehiscence to the 20th day. In no instance was it possible to say that the dehiscence was specifically responsible for the patient's death. It did, however, in every instance, further complicate a critical problem.

Conclusions

Dehiscence is a most serious wound complication, but in itself infrequently fatal. Our experience with a series of 42 patients with this complication is reviewed.

Use of Unilateral Carotid Artery Compression as Means of Detecting Potential Stroke Patients

Part II

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Arteriography

Arteriography was carried out on the 70 patients referred for further evaluation to different institutions. Of these 70 patients, 63 were found to have significant arterial disease by carotid or retrograde arch arteriography. Twelve patients had arch study, and 58 underwent percutaneous carotid arteriography. This represents 90% of those 70 patients who were asymptomatic and who were found to have significant arterial disease by arteriography through carotid compression. Of the 63 patients in whom significant arterial disease was found, 11 were found to have small artery disease; that is, disease in a location which was inaccessible surgically.

Complications as a result of either retrograde femoral aortic arch arteriography or percutaneous carotid arteriography are limited to two patients with postarteriographic hematomas in the neck and one with a hematoma in the groin; all resolved spontaneously with no sequelae.

Treatment

Nonsurgical treatment was employed in those individuals with small artery disease and those inoperable because of other factors, and this involved regulation of the blood pressure to maintain it at a level high enough to prevent any thrombotic or ischemic process resulting from hypotension. We did not allow the blood pressure to drop below 130 systolic if possible, and if some of these patients were receiving antihypertensive medication, it was titrated to this level or above. The surgical treatment employed was unilateral or bilateral carotid endarterectomy, carotid subclavian bypass, or carotid endarterectomy in combination with carotid subclavian bypass. The types of procedures and the number of patients receiving the type of procedure are to be found in Table 5. As noted in this table, 16 of these patients required bilateral carotid endarterectomy. The time interval between doing one side and the other varied from ten days to two months. One patient was operated at ten days because he had significant bilateral stenosis, and after having done the endarterectomy on one side, he began to develop symptoms referable to the stenotic area on the opposite side and it was felt that due to this transient cerebral ischemia, which he had not had prior to that time, he might develop permanent injury. A vein patch was required in 11 patients and the technique was to preserve the external jugular vein and evert it and use this for the patch. See Table 6.

Of the 63 patients found to have significant arterial disease as noted previously, 11 were found to have small artery disease. However, 4 of the patients who had significant arterial disease and who had what were considered accessible lesions, refused surgery. Of those one died from shock and cerebrovascular accident after having fallen and sustained an intertrochanteric fracture of the hip, and another died of acute myocardial infarction. The other two are living and doing reasonably well on anticoagulant therapy. However, no vasodilators were used, since it has been reasonably well established by Meyer, Fang and Denny-Brown[6] and also by Shalit, Reinmuth and Scheinberg[7] that these are negative at best. Cerebral vasodilatation is not a desirable goal in the treatment of ischemia resulting from vascular occlusive disease; the ischemic area already has locally present physiologic stresses necessary for local vasodilatation and systemically administered cerebral vasodilators do not augment the local effect but actually rob the territory of supply of the pressure he had needed for profusion. The hemodynamic principle demonstrated should apply to use of any agent, and one should use caution in the general use of such agents when the goal is to increase the supply of blood to ischemic areas of the brain through collateral vessels.

Two patients died before surgery could be done. They had accessible lesions and had already been scheduled for surgery. One committed suicide and the other died of acute myocardial infarction. Five patients who had surgically accessible lesions were not operated upon because of factors involving other disease processes. See Table 7.

The results in the surgically treated group are difficult to assess due to the fact that none of these patients had symptomatology prior to their surgery. However, almost all have stated that they felt better generally than they had for several years and all but 6 stated they had marked recent memory improvement. In the 11 patients who upon close questioning revealed a questionable transient cerebral ischemia attack, no attacks have occurred since surgery and all

Table V

Type of Operation	No. of Patients
Unilateral carotid endarterectomy	21
Bilateral carotid endarterectomy	16
Carotid-subclavian bypass	3
Carotid-subclavian bypass and simultaneous ipsilateral carotid endarterectomy	1
	41

Table VI

Symptoms produced by unilateral carotid compression.

Dizziness
Syncope
Headache
Seizure
Blurred Vision
Speech Difficulty
Parathesias
Unconsciousness
Confusion

Table VII

Status of 21 patients with significant arterial disease but not undergoing surgery.

I. Small artery disease - 11
  a. Living and well and asymptomatic — 4
  b. Living and recurrent TCI — 3
  c. Atherosclerotic organic brain syndrome 2
  d. Dead — 2

II. Died before surgery could be accomplished - 2
  a. Suicide — 1
  b. Acute myocardial infarction — 1

III. Surgically accessible lesions not operated because of other significant factors involving other diseases.
  a. Living with organic brain syndrome and also with aneurysm extending from arch of aorta to bifurcation — 1
  b. Severe heart disease — 1 dead
  c. Chronic renal failure with paraphlegia — 1 living
  d. 89 year old patient in extremely poor general condition — 1 dead

IV. Status of four patients with surgically accessible lesions and offered surgery but refused.
  a. one living and well but with recurrent TCI.
  b. one living and well and asymptomatic.
  c. one dead from cerebrovascular disease after intertrochanteric fracture.
  d. one dead of acute myocardial infarction.

gone 14 months or more and have been entirely asymptomatic.

There were no operative mortalities. One patient died two days after surgery. He had diffuse arteriosclerotic disease elsewhere, including aorto-iliac disease; severe diabetes and severe coronary artery disease, shown at autopsy; the cause of death was post-operative myocardial infarction. Of the 41 people who underwent surgery, there were two late deaths, a 75 year old lady who had diabetes and extensive arteriosclerotic cerebral and cardiovascular disease, who did well for two years and then died of a myocardial infarction; and a 76 year old male who had moderate chronic obstructive emphysema and died of extensive myocardial infarction two years and three months after surgery. The remaining 39 patients are all living and well and have been evaluated every four months since surgery. It is interesting to note that now, carotid compression no longer induces the syncope or other symptomatology of cerebral ischemia that it produced prior to the surgery with 5 second compression.

Associated Diseases

As suspected from the fact that occlusion resulted from atherosclerosis in all cases, disease of atherosclerotic origin was frequent and the associated diseases are as follows:

> Nineteen were diabetic; 13 had hypertension; 10 with heart disease; two with aneurysms. Six had occlusive disease of the aorta and its branches; one had polyarteritis nodosa.

Associated lesions of the aorta and other arterial segments were treated at a second operation in 6 patients. The following associated diseases were discovered in the 70 patients:

Diabetes	19
Hypertension	13
Heart Disease	10
Aneurysm	2
Occlusive disease of aorta and its branches	6
Polyarteritis nodosa	1
Large hiatal hernia - second surgery after carotid endarterectomy	1
Adrenal adenoma	1
3° heart block requiring pacemaker	2
Chronic Calculous cholecystitis	3
Peptic ulcer	2
Carcinoma of the prostate	1
Arteriosclerotic psychomotor epilepsy	2
Chronic obstructive emphysema	2
Glaucoma	2
Cataracts	2
Hypothyroidism	1
Cerebral atrophy, arteriosclerotic and progressive	1
Kimmelstiel-Wilson syndrome	1
Benign prostatic hypertrophy, symptomatic	4

Of the 7 patients found not to have any significant arterial disease by arteriography, one was later diagnosed as a carotid sinus syndrome, two were diagnosed as Meniere's disease, two as Stokes-Adams syndrome, one as spasm of the cervical muscles, and in the final one, no basis for the positive response to carotid compression could be established.

Summary and Conclusion

Because carotid arterial compression has been maligned, and unjustly so, in so many instances, and always with reference to patients who were symptomatic or who were felt to have some atherosclerotic plaques as the etiology for their cerebrovascular ischemia, it was felt useful to attempt this procedure on those individuals who were asymptomatic as a screening technique in an attempt to identify at the earliest possible date those people with significant stenotic lesions in the extracerebral vascular tree. Carotid compression has been carried out by numerous investigators and has resulted in little or no difficulty.[1] Therefore, realizing the advantages and disadvantages, a group of 457 patients undergoing routine annual physical or presenting with some other complaint not related to the cerebrovascular system were subjected to unilateral carotid artery compression for 5 seconds, first on one side and then on the other. The response of the patient during this 5 second interval was noted and those 70 patients exhibiting symptoms of cerebral ischemia after 5 second compression were then singled out for arteriographic examination and subsequent surgical or medical therapy in those 41 having accessible lesions; 22 had inaccessible lesions or refused surgery. Simultaneous with compression of the carotid artery, palpation of the radial pulse on the ipsilateral side was also done resulting in the discovery of 4 patients with subclavian steal syndrome.

Of those 70 patients singled out for further examination by arteriography, either by retrograde arch study or percutaneous carotid study, 63 were found to exhibit significant arterial disease by arteriography; 49 had surgically accessible lesions and 41 underwent surgical correction for their disease.

The only instance in the literature that could be found of surgery being done for carotid artery stenosis in those people who were relatively "asymptomatic" is a study by Young et al in which he felt that these people who were about to undergo a major surgical procedure should first have correction of their carotid artery stenosis in order to prevent a stroke secondary to the possible hypotension connected with general surgery.[9]

The pathology and pathophysiology has been discussed along with the results of the arteriography and also the treatment and its results and the results in the group who had surgically inaccessible lesions or who refused surgery. A list of associated diseases is also included.

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Renal Allotransplantation in Humans Collective Review and Case Reports*

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Introduction

HUMAN transplantations during recent years have been progressing rather rapidly. Surgeons have replaced failing hearts, kidneys, livers, lungs and pancreases. Refinements in surgical techniques have made possible all major transplantations. However, the major problem in human transplantation, the prevention of the homograft rejection, remains unsolved, despite the most recent advances in transplantation immunology.

Table 1 depicts the status of major organ transplantations, up to December, 1968. A total of approximately 2,100 kidneys were transplanted. In 1,000 patients, the transplanted kidneys were functioning up to one year, ten years being the longest non-twin survival.

The heart transplantation record is presented in Table 2 to emphasize its importance. Up to November 1, 1970 the Organ Transplant Registry of the National Institute of Health recorded a total of 167 heart transplantations performed by 59 transplant teams in 164 patients, of which the current survival comprises 23 patients.[2]

Table 3 shows the survival data beyond three months up to November 1, 1970. Twenty-seven patients survived more than 12 months, and seven patients lived beyond 24 months post heart transplantation.[2]

If we evaluate all major organ transplan-

Table 1

STATUS OF MAJOR ORGAN TRANSPLANTATIONS
UP TO DECEMBER, 1968[6]

	KIDNEYS No. Cases	LIVER No. Cases	LUNGS No. Cases	PANCREASES No. Cases
Total No.	2,100	39	8	6
1 yr. survival	1,000	1	0	0
Longest survival—	12 yr. twin 10 yr. non-twin	13 mo.	18 days	4½ mo.

From: Fahey, JL et al. NIH Clinical Staff Conference: Recent Progress in Human Transplantation Immunology. Ann Intern Med 71: Dec 69.

Table 2

HUMAN HEART TRANSPLANTATION
November 1, 1970[2]

WORLD TOTALS

Transplant Teams (20 countries)	59
Transplants	167
Recipients	164
Current Survivals	23

Data obtained from ACS/NIH Organ Transplant Registry.

Table 3

HEART TRANSPLANTATION
Survival Data — Three Months or More
November 1, 1970[2]

Time Interval	No. of Recipients Surviving to Interval	Current Survivors
3-6 months	57	21
6-9 months	37	20
9-12 months	31	19
12-15 months	27	17
15-18 months	21	14
18-21 months	16	13
21-24 months	9	9
24-26 months	7	7

Data from ACS/NIH Organ Transplant Registry.

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tations, the only successful major organ that can be transplanted without being considered on an experimental basis is the kidney homograft transplant.

Dialysis vs. Renal Transplantation

At the present time, dialysis and renal transplantation complement each other to culminate in the prolongation of life of patients in chronic renal failure and their rehabilitation as productive members of society. Unfortunately, all patients do not meet the requirements for renal transplantation, and a great number of them do not have donors available.

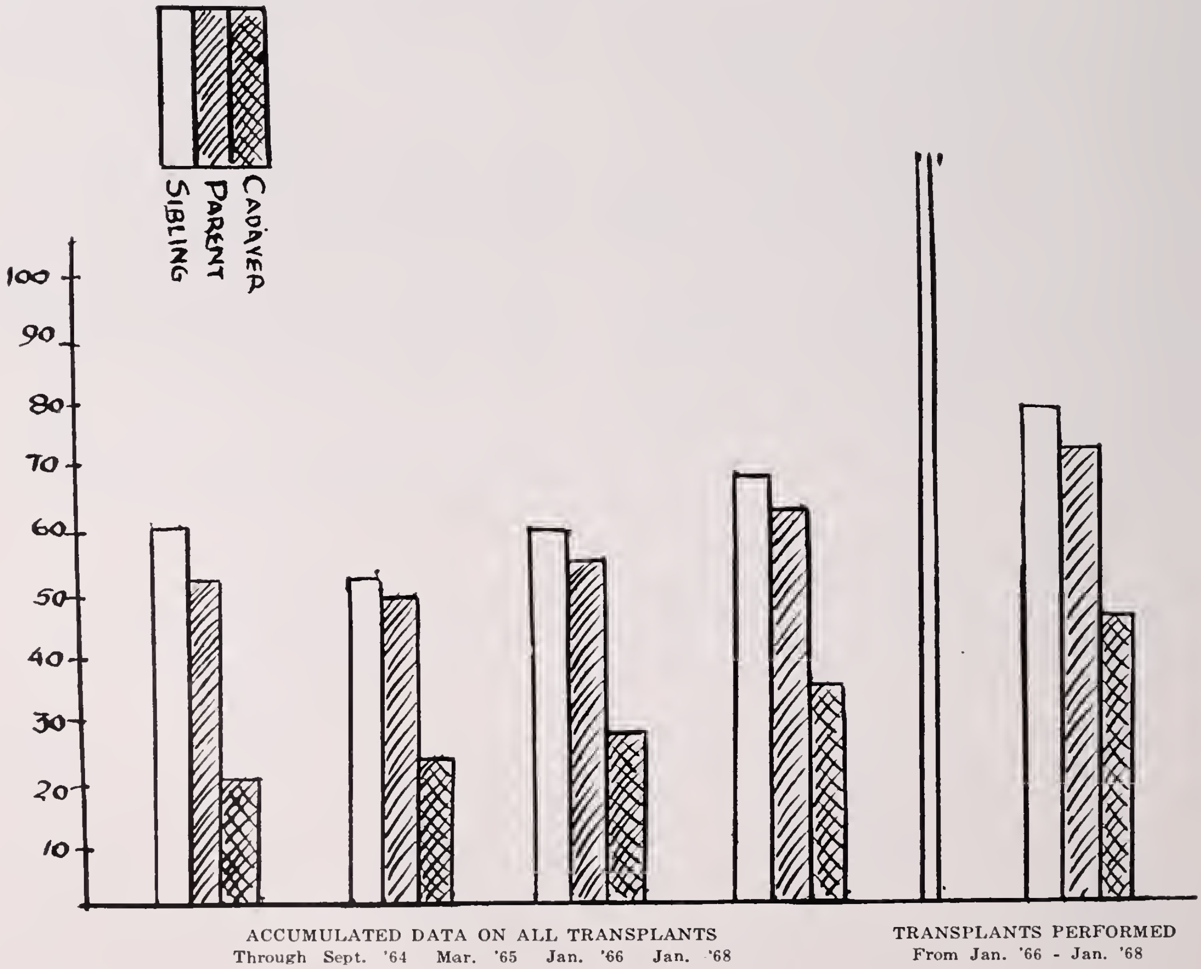
If we compare survival rates of patients maintained exclusively on chronic hemodialysis programs with statistics of patients post renal transplant, both appear competitive in prolonging of life of the chronic uremic patient. However, analysis of each separately can give a clear idea of the advantages of the renal allograft transplant in restoring the patient to a more productive life than maintenance on dialysis.

Survival data obtained from 14 dialysis centers evaluating 302 patients maintained in hemodialysis show 87% survival at one year and 77.3% at two years, with a steady but moderate decline thereafter. The projected seven years survival was 57.8%.[20]

After renal transplantation, as shown in Table 1, approximately 47.8% are surviving after one year post-transplant; however, this overall survival presents different figures when we consider separately the statistics of patients with kidneys obtained

Table 4

PERCENT KIDNEY TRANSPLANT SURVIVAL AT ONE YEAR[37]



From the sixth report of the human kidney transplant registry. Transplantation 6:944 - 951, Nov. 1968. Reproduced with permission of C. F. D. Ackman, M.D., and Williams and Wilkins Publishing Co.

from siblings, parents, or cadaver donors as we summarize in Table 4 taken from the sixth report of the Human Transplant Registry.[37] Evaluation of renal allograft transplants reported by Starzl indicates a projected five year survival rate of 90% when kidneys are obtained from related donors.[38] In 51 renal transplants at the Stanford University Hospital since July, 1964, a projected three year survival of 78% was reported in patients receiving kidneys from related donors.[21] In mentioning disadvantages of the patient being kept alive in chronic dialysis programs, we have to consider that the dialyzers partially substitute for the excretory capacity of the kidney, but not the homeostasis of electrolytes such as calcium and phosphorus, and cannot fully prevent osteodystrophy and hyperparathyroidism,[12, 25, 32] infertility, intractible pruritis, etc. Other glandular functions of the kidney are also impaired. The absence of erythropoietin in the damaged kidney or anephric patient is at least partially responsible for the anemia[18, 30] seen in such patients.

Excessive production of renin by the damaged kidney will result in hypertension. Probably the greatest inconvenience for patients in long term hemodialysis is the restriction of water, salt, and proteins, and the time they spend during the dialysis process.

Transplantation, if successfully done, brings more comfort to the patients, although a well-functioning graft still will require immunosuppressive treatment that could affect the recipient, by suppression of his immunological mechanism or by producing bone marrow depression and its consequences. In conclusion, it is well established that hemodialysis and transplantation should be employed alternatively to achieve maximum benefits in the treatment of the chronic uremic patient. When the dialysis program is conducted adequately, and the recipient and donor are selected properly, the five year survival of the transplanted patients can be projected to 90% as reported by Starzl et al.[38]

Kidney Transplantation

The general requirements for a successful kidney transplantation as for any other successful tissue transplantation are:

1. Organ preservation.
2. Surgical techniques including preoperative preparation of both donor and recipient and postoperative care of the recipient.
3. Homograft reaction.

Organ Preservation: When the transplantation of the kidney is to be performed from a live donor to the recipient, organ preservation is not a major concern, as will be explained later. When dealing with cadaver donors, however, this has to be a major consideration. It is important for the understanding of the necessities of the preservation of the kidney to define the following terminology.

a. Warm ischemia time: the period from death to the time when the temperature of the kidney is reduced by perfusion with cold solution.

b. Total ischemia time: the time from the expiration of the donor until the revascularization of the kidney donor in the recipient.

Both warm ischemia time and the total ischemia time should be reduced as much as possible to obtain a good function of the organ. With the improved perfusion techniques, employing special perfusion apparatus with hyperbaric and hypothermic techniques, a kidney can be preserved up to 17 hours with complete return of function after transplantation. Animal kidneys have functioned up to a week if implanted in a primate. Human kidneys have also functioned satisfactorily after transplantation following perfusion in this manner for 12 to 24 hours.

If no special perfusion methods of kidney preservations are available, the warm ischemia time and the total ischemia time should be reduced as much as possible. Successful kidney transplantations have been performed with a maximum of one hour of warm ischemia time and nearly ten hours of total ischemia time following gravity perfusion with Ringer's lactate solution alone. (Fig. 1). The major complication of the long period of ischemia (especially prolonged warm ischemia) is acute tubular necrosis, which in most instances can be managed satisfactorily with temporary hemodialysis. Return to function with a fall in serum creatinine to 2.5 mg% occurs usually within three days and in many instances from 3 to 7 days. In a series reported by MacLean and MacKinnon in Montreal, a kidney returned to function after 40 days from the day it was transplanted.[23]

Surgical Techniques: Improvement in surgical techniques including selection of recipients and donors, methods of preparation of patients, and postoperative care are made possible to improve the percentage of surgical mortality and morbidity.

Selection of Recipients: The general requirements we follow for the selection of the candidates for renal allograft transplantation are essentially the same as have been published by others.[15, 21, 24] Patients qualifying for transplantation must be in end stage chronic renal failure and already admitted to a hemodialysis program. They should not have a disease limiting their life span to less than five years. Patients must not have a major element of infection at the time of transplantation and must have a normal lower urinary tract. Any vascular, cardiac, or neurological changes secondary to renal failure must be reversible. Patients should also be judged able to tolerate a major surgical procedure.

Figure 1

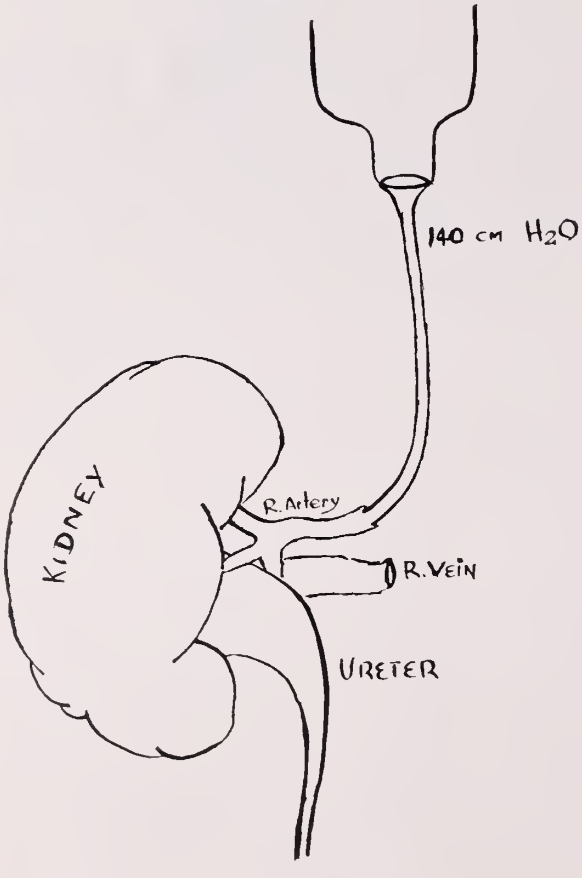


Figure 1. Perfusion technique as performed in kidneys obtained from live donors.

Selection of Kidney Donors: The sources of kidneys are related and unrelated living donors and cadaver donors. The related donors are usually siblings, parents, or other categories of relatives.

The selection of donors is usually started electively by performing the histocompatibility test. Major ABO erythrocyte antigens are the single most important antigens in this selection process. When kidneys are obtained from patients who have died suddenly from natural or accidental causes, this may be the only test performed. Leukocyte antigen matching is also employed for elective selections of donors, and at the present time, at least 15 HL-A antigens can be defined. Allelic combinations are highly variable.[17] Histocompatibility testing is mandatory when the kidney is not obtained from an identical twin brother or sister.

In general, close relatives, which includes parents and siblings under 45 years of age, have priority. Medical evaluation of the donor is thoroughly done. The first step is a complete physical examination and exacting history searching for hypertension, pyelonephritis, albuminuria, or renal calculi. The efficiency of renal function is determined by BUN, creatinine, and creatinine clearance determinations. Intravenous pyelogram and urine cultures are requested. Aortography and selective renal arteriography are performed to determine the renal vascular anatomy. The two main principles in the kidney transplantations are to offer a recipient a good functioning kidney removed safely from the donor, and to assure that the remaining kidney in the donor will function in optimal conditions. As an example, in a young woman who is likely to have future pregnancies, we would prefer to remove the right kidney leaving the left kidney in the donor, because of the tendency of the right kidney to develop hydronephrosis more frequently than the left.

Histocompatibility Typing: In summary, there are two major histocompatibility systems. One is the erythrocyte system, easily identified and named as the ABO system and the leukocyte or HL-A system usually associated with the terms, human leukocyte antigen.

As mentioned above, the major ABO system is the most important in the selection of donors, and in many instances this is the only test that can be performed rapidly when sources of kidneys for transplantations are cadavers.

Many renal allografts are destroyed by acute or hyperacute rejection when tissue typing is incompatible with respect to the red cell ABO group.[7, 35] Nevertheless, there are reports of successful kidney transplantations in patients undertaken under these circumstances.[5, 28, 39]

The importance of the ABO system in all types of transplantations is at present accepted as basic. However, leukocyte typing must be tested whenever possible, and in every transplant undertaken electively to minimize the possibilities of rejection.

Preparation of Patients for Surgery: When the source of the kidney is cadaver, the removal of the graft is usually done in the operating room as soon as the time and circumstances permits its removal to shorten the time of warm ischemia. Whenever possible, heparinization of the donor is performed before expiration, as well as oxygenation of the patient. Once the kidney is removed and perfused with the conventional cold solution (Ringer's lactate), it is placed in a sterile container bathed in the same cold heparinized solution employed during perfusion. When transplantation is performed on an elective basis, we have to consider the preparation of both donor and recipient.

a. Preparation of donor: The donor is prepared as for any elective nephrectomy.

b. Preparation of the recipient: Recipients must be in optimal condition of nutrition and electrolyte balance. The presence of infection contraindicates transplantation as it does any other major surgery. Active peptic ulcer and leukopenia are relative contraindications, considering the massive doses of immunosuppressive drugs to be administered immediately post-transplant. Patients with controlled hyperparathyroidism secondary to the uremic process should be observed cautiously in the postoperative period. The surgical treatment of this condition must be considered prior to transplantation.[10] In most centers, bilateral nephrectomy of the recipient is performed prior to transplantation, primarily for better control of the blood pressure on dialysis of the anephric patients,[31] but also to avoid the problems in healing major surgical wounds after immunosuppressive therapy has been started. Nephrectomy may also remove a source of infection, or decrease other complications such as bleeding, discomfort, and pain in the case of polycystic kidneys.

Nevertheless, in a series of patients transplanted at Ann Arbor University of Michigan, pretransplant nephrectomy (assumed to be within two weeks of the actual transplantation) was considered as a possible contributing factor in 50% of the patients developing oliguria post-transplant; the other two contributing factors being over vigorous and prolonged preoperative dialysis and the use of cephalothin routinely administered.[41]

Bilateral nephrectomy at the time of transplantation should be avoided as not being well tolerated by a patient receiving massive immunosuppressive treatment.[15]

We usually dialyze the patient two days prior to an elective kidney transplantation, and if at this time the hematocrit remains within our conventional limits of 15-20%, we prefer to transfuse these patients with one or two units of packed cells during the process of dialysis.

Immunosuppressive treatment with Imuran in doses of 4 mg per kg of body weight is started the day before surgery. Electrolytes, BUN, creatinine, and CBC are determined on the day of surgery. Four or five units of leukocyte-free whole blood is prepared and held for surgery. Other preoperative orders are as for any other routine procedure.

Surgical Procedure: In general, when living donors are available, the removal of the kidney for transplantation is performed simultaneously with the preparation of the recipient, transection of the renal vessels being done only when word is received that the recipient's vessels have been fully dissected and prepared.

Surgical Technique: Surgical technique has now become the most standardized aspect of renal transplantation, with only an occasional minor variation technique in some centers. The following is a summary of the technique most satisfactory in our hands.

Although placement in the thigh, with anastomosis of the renal vessels to the femoral artery and vein enjoyed brief usage in the initial pioneer transplantation procedures, and although intraperitoneal placement of the organ, with anastomosis to the aorta and vena cava is occasionally necessary to place an adult organ into an infant, the most widely used position is the retroperitoneal space of the iliac fossa.

Figure 2

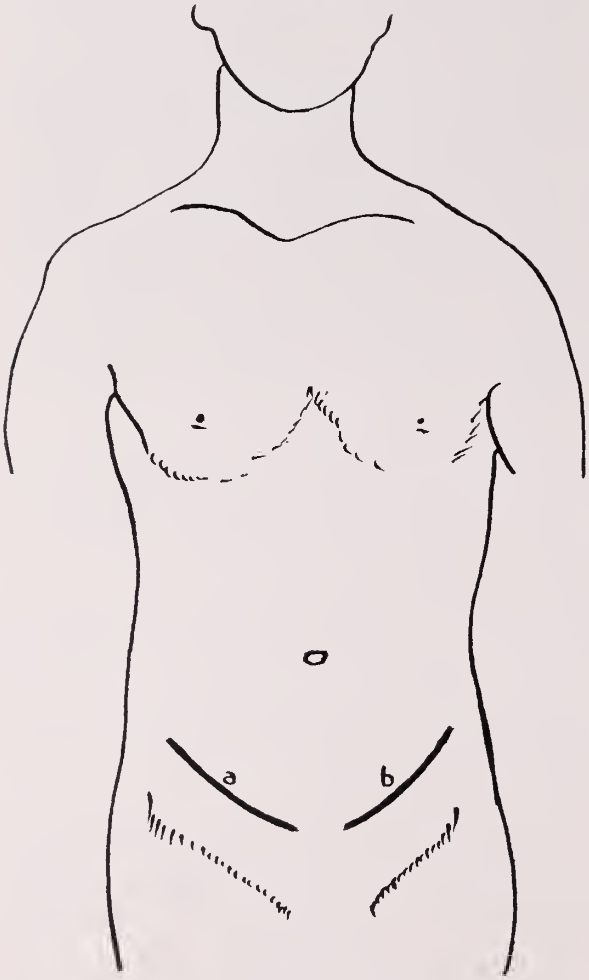


Figure 2. a and b demonstrate the usual types of skin incision performed in adult recipients. Right kidney is transplanted to left iliac fossa and vice versa.

Approach is made by means of an oblique incision parallelling the inguinal ligament from pubic tubercle to the flank (Fig. 2), displacing the peritoneum and its contents medially and superiorly. The inferior epigastric artery and vein are ligated and transected, as is the spermatic cord in the male. The iliac vein is dissected free from the inguinal ligament nearly to the bifurcation of the common iliac artery. Personal preference dictates whether the vein is fully mobilized by transecting the posteriorly positioned branches. If the vessel is very deeply placed, this may become mandatory in order to elevate the vessel to a more favorable position in the wound.

Usually an end-to-side anastomosis is performed between the end of renal vein and anterior surface of iliac vein. (Fig. 3). A 4-0 or 5-0 suture may be chosen. The short nature of the renal vein, especially of the right kidney suggests that this anastomosis be performed first.

Since the intrarenal collateral venous connections are extensive, duplication of the renal vein requires only one anastomosis. The other veins can usually be ligated with impunity.

Anastomosis of the renal artery may be either end-to-end to the internal iliac (hypogastric) artery (the most widely used), or end-to-side to the side of the external iliac artery. Again, 4-0 or 5-0 suture may be used in a continuous fashion. Although most often, the internal iliac artery is larger than the renal artery, this is not difficult to overcome in the suturing. Trimming the renal artery slightly obliquely helps also. (Fig. 4).

Since the renal arteries are end arteries, with poor collateral intrarenal connections, infarction of a portion of the kidney may result from failure to supply blood to *all* arteries. When two or more equal size

Figure 3a

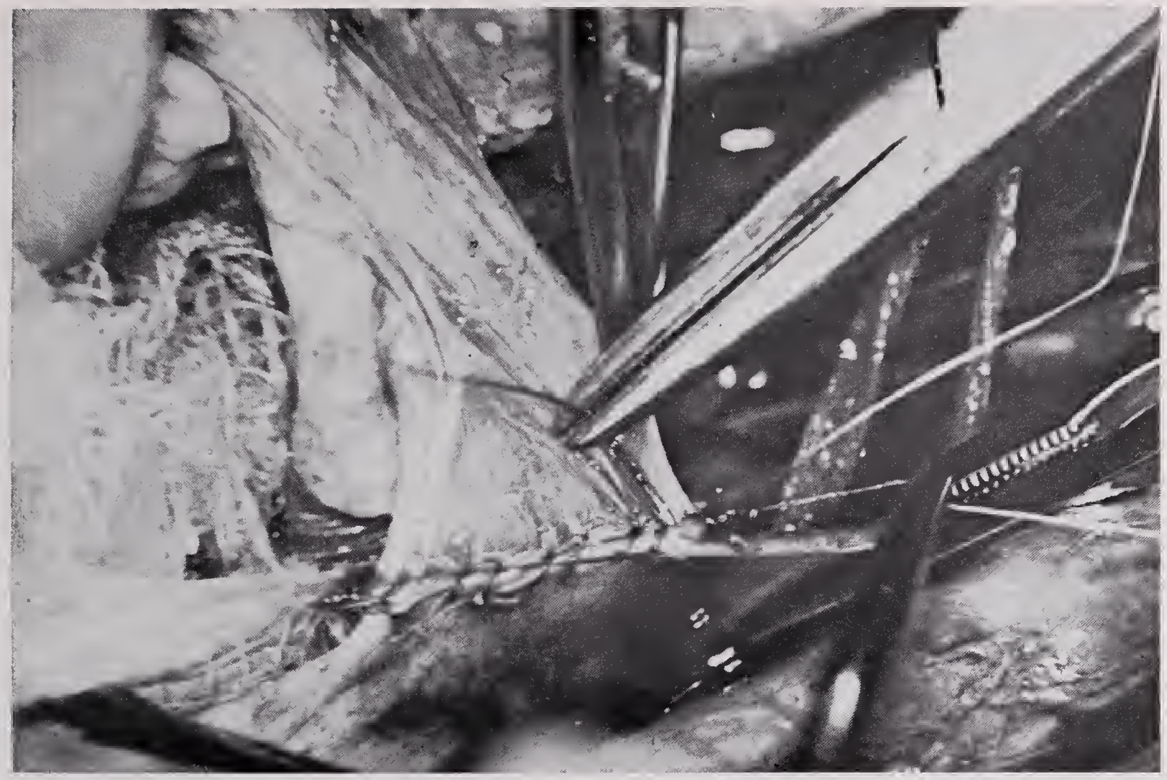


Figure 3b

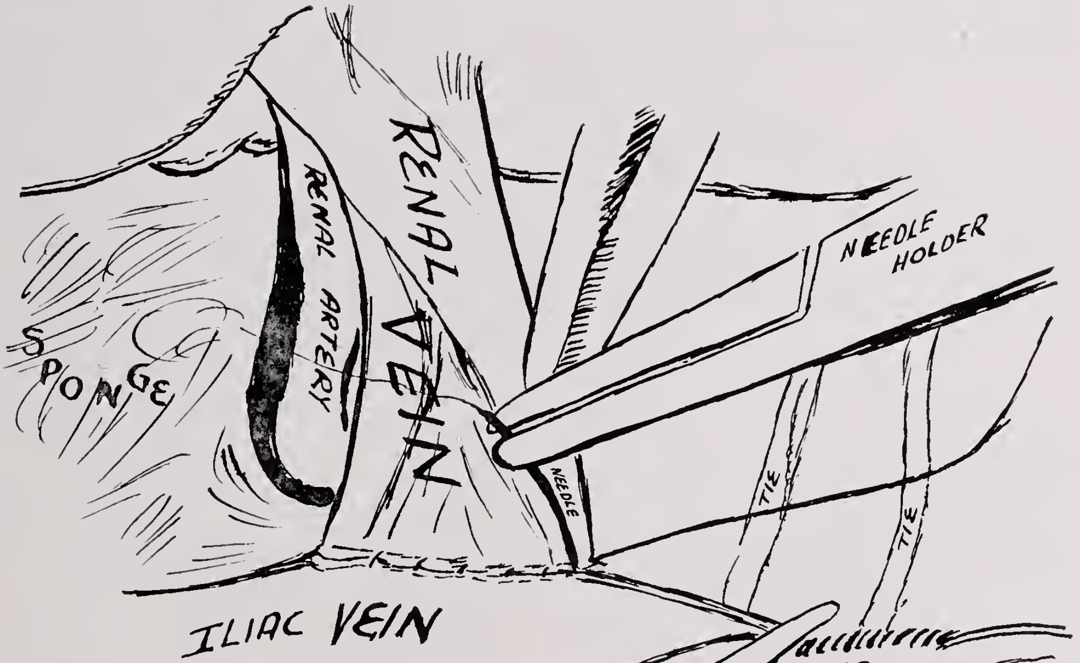


Figure 3. Demonstration of end-to-side anastomosis of the right renal vein of the kidney donor and the left iliac vein of the recipient.

Figure 4a

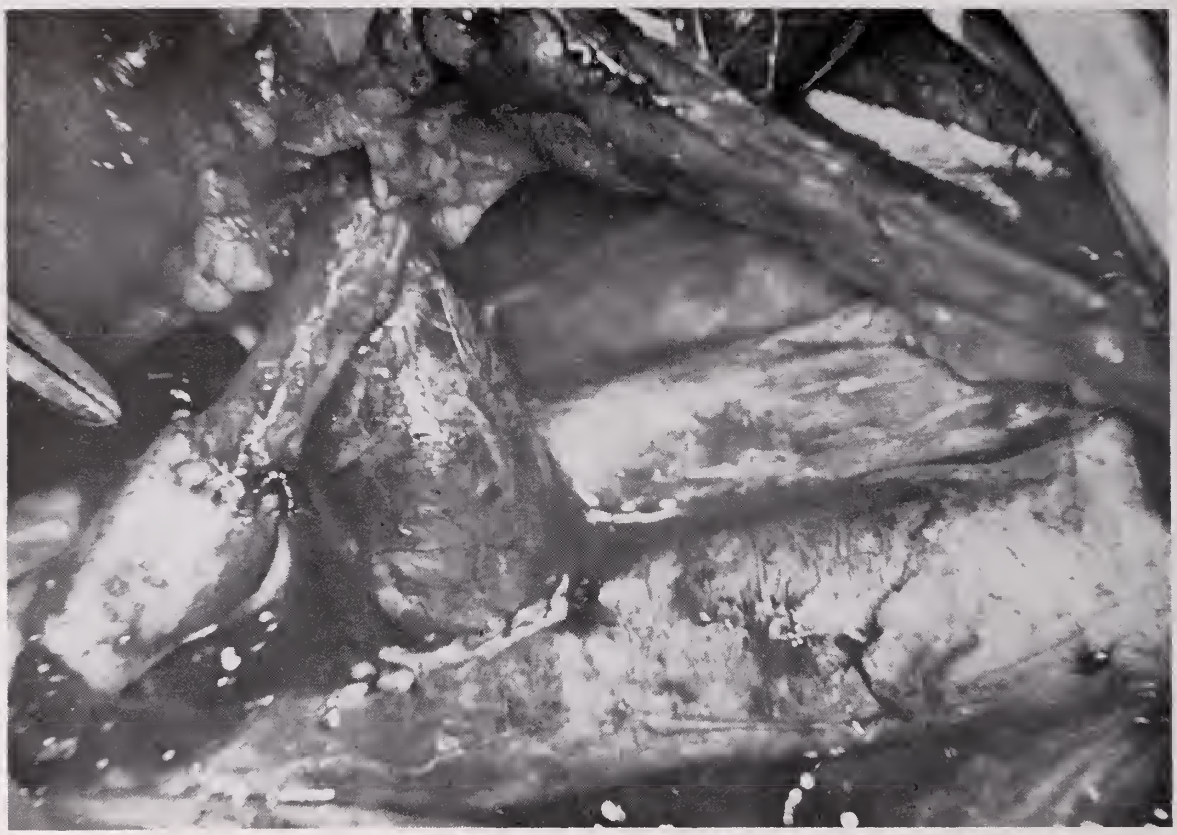


Figure 4b

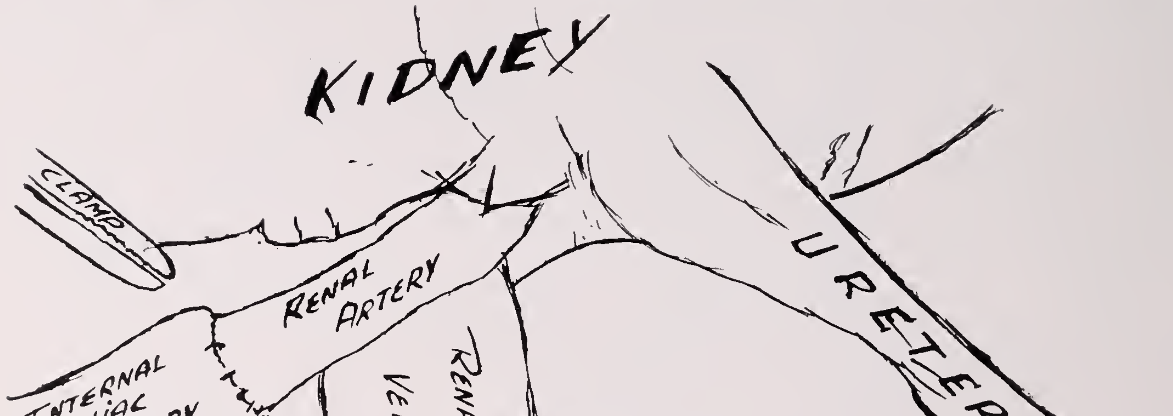


Figure 4. Arterial and venous anastomosis between donor and recipient are being completed and the vascular clamps released to re-establish renal flow in the transplanted kidney.

arteries are present, each should be sutured to the internal or external iliac artery. When a single lower pale artery is found (supplying 25% or less of the kidney), an end-to-end anastomosis to the inferior epigastric artery near the pubis is very rewarding. In desperation, when no adequate anastomosis can be created to a small artery, it may be ligated, but with the realization that this will infarct the area of supply to that artery. It is almost never necessary to do this with an artery serving more than 25% of a kidney. Careful observation of the return of color from the blanched bloodless appearance to the livid, engorged appearance will assure the operator of a complete restoration of flow to all segments. Whenever possible, aortography should be done, to assess the size and position of donor arteries prior to nephrectomy. This is mandatory in living donor transplants, but not always possible in cadaver donor situations.

The urinary collecting system anastomosis in our estimation is best done by implanting donor ureter into the lateral inferior aspect of the bladder as a ureteroneocystostomy. Care should be taken to include areolar tissue with the donor ureter as it is removed, so as to preserve the tenuous ureteral blood supply through its 5″ to 7″ length. A standard tunnelling technique is used.

An indwelling bladder catheter is advisable for 24 to 48 hours to measure urine flow accurately, both to be assured that it is being formed in adequate volume, and to gauge its volume in the event that polyuria is brisk, so that intravenous fluid replacement can keep pace with fluid losses. Although most often it is convenient to place a right kidney into a left iliac fossa and vice versa, this rule can be broken. The reversal of the kidney to the opposite side allows the renal artery and vein to lie closest to iliac artery and vein in the new site.

The kidney finds its spot of best repose in the retroperitoneal space, depending on the level of anastomosis, and is held in place by the weight of peritoneum, muscle, and intestine against the iliac wing.

Postoperative Complication: The management of the patients after renal transplantation presents peculiar situations, mainly in the early postoperative period when the possibilities of rejection must be considered in cases of oliguria or anuria.

In general, complications occurring in the immediate postoperative period can be divided into three categories:

1. Presence of a high degree of incompatibility between the graft and recipient resulting in episodes of hyperacute or acute rejection.

2. Technical problems resulting in: a. ureteral obstruction or leakage; b. major arterial or venous occlusion; c. acute tubular necrosis (ATN) and post-transplant polyuria.

3. Reappearance of the disease on the allograft.

4. Inadequate administration of fluids and electrolytes.

The standard form of rejection (acute rejection) can be treated successfully if recognized in the early stage. Nevertheless, in many instances, the management of this complication is beyond the present methods of treatment. Because of the complication of this subject, it will be discussed later in a separate chapter.

Hyperacute rejection results in cortical necrosis and complete destruction of the graft usually by thrombosis of the major vessels. Although hyperacute rejection generally occurs with major donor-recipient incompatibilities, there are a few reports in the literature documenting survival of renal homografts undertaken in these circumstances.[5, 28, 39] Starzl et al[39] reported three cases of renal homotransplantation in which ABO incompatibilities between the donor and recipient existed. Two of the renal homografts were obtained from living donors, and the third from a cadaver. Hyperacute rejection can also occur if the recipient has developed cytotoxic antibodies spontaneously or by a prior unsuccessful transplant. This type of accelerated rejection leads almost universally to failure of the graft.

Ureteral obstruction is often unrecognized or in some cases misdiagnosed as an episode of oliguria secondary to acute tubular necrosis or to rejection crisis. We report two cases in which ureteral obstruction occurred after a few hours of diuresis in patients receiving kidneys from related donors.

Case Report #1

This 34 year old negro female was admitted to another hospital in congestive heart failure. After preliminary workup including cystoscopy and retrograde pyelogram which were found to be normal, the patient was transferred to the Deaconess Hospital on January 11, 1970 with the diagnosis of uremia. This patient was prepared adequately by means of hemodialysis after diagnosis of end stage renal failure was made. On February 20, 1970 bilateral nephrectomy was performed in preparation for a renal transplant. Postnephrectomy, the patient did well. Her general condition improved markedly. After tissue typing, on March 11, 1970 she underwent renal allograft transplant. The right kidney of the donor was placed in the left iliac fossa. For the first few hours post-transplant, the output was 250 to 300 ml of bloody urine per hour. After 7 hours, urinary output ceased abruptly. It was thought the Foley catheter was plugged, and it was changed. However, the output remained at zero. At this time, the possibility of rejection was considered. However, since the most likely diagnosis was ureteral obstruction at the site of the implant, cystoscopic attempts were made to catheterize the ureter. These were unsuccessful. Intravenous pyelogram done on the first postoperative day was not diagnostic. On the same day, renal arteriogram of the transplanted kidney was performed showing patency of the renal artery with good nephrogram effect. On the second day post-transplant delay films showed suspicious dye being accumulated in the renal pelvis which was confirmed by stereofilms. (Fig. 5). Diagnosis of ureteral obstruction was made, and the patient was taken to surgery. After the bladder was opened, it was noted that the end of the ureter was edematous and probably angulated at its entry point into the bladder wall. A ureteral catheter was placed from renal pelvis, through bladder, to external drainage. Following this reoperation, the urinary output averaged 200 ml per hour during the next 24 hours. The next postoperative course was uneventful, and the patient was discharged on April 18, 1970 with good renal function.

Urinary fistulae may occur in the early postoperative period from kidney, ureter, or urinary bladder, and can be life threatening in patients receiving massive doses of immunosuppressive agents. When small fistulae seal spontaneously, one should be aware of the possibility of small abscess formation that can develop into septicemia. Fistulae from kidneys are almost always secondary to infarction of a segmental renal artery. These usually close.

Figure 5

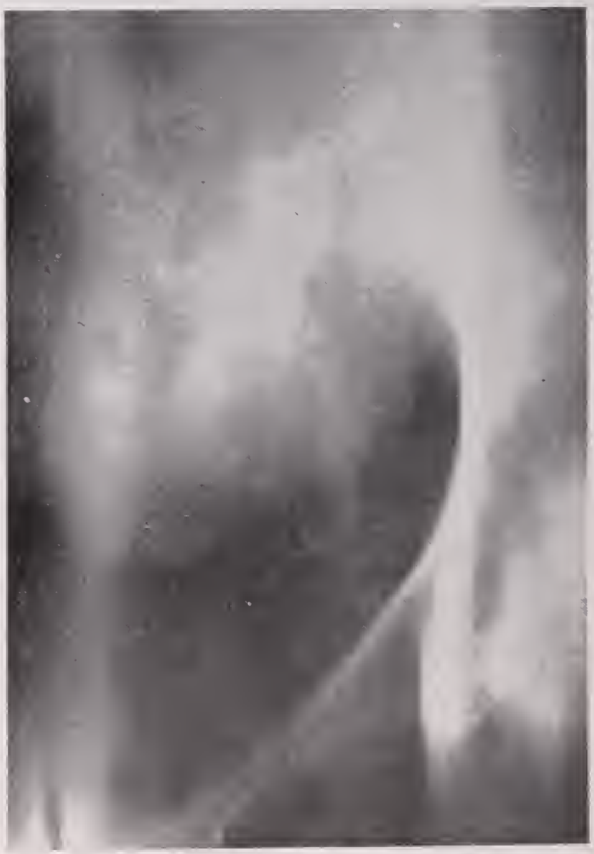


Figure 5. Dye accumulated in the renal pelvis of the transplanted kidney demonstrated by stereo film taken 18 hours after intra-venous injection of the contrast material. (Case report #1).

Ureteral fistulae usually occur at the site of the anastomosis, and almost always end in the loss of the allograft. Fistulas from bladder usually occur from the bladder closure. MacLean et al[23] reported that 15 out of 32 patients who developed urinary fistula died of sepsis directly related to this complication. We have never experienced this complication in any of our patients receiving kidneys either from live or cadaver donors.

Major arterial or venous occlusion always result in the loss of the transplanted kidney. We have experienced renal artery occlusion in one patient undergoing a repair for renal artery stenosis at the site of the anastomosis.

Case Report #2

A 31 year old white male was admitted to the hospital for the first time with the diagnosis of nephrotic syndrome. The BUN was 150 mg%, and the creatinine 11 mg%. Blood pressure was 160/100. The chest x-ray revealed bilateral hydrothorax. Biopsy of the kidney demonstrated chronic lobular glomerulonephritis. In December, 1967, the patient was placed on hemodialysis. On April 22, 1969, bilateral nephrectomy was performed, and the diagnosis was chronic atrophic glomerulonephritis with severe hypertension and arteriosclerosis. In June, 1969, the patient underwent transplantation with a cadaver kidney. The patient tolerated the procedure well and was discharged on prednisone 8 mg q 8 h and Imuran 50 mg q 6 h. In July, 1969, the patient had an episode of rejection that was treated successfully. Two more episodes of rejection were treated successfully. On December 29, 1969, he was admitted to the hospital for severe hypertension (200/120). The creatinine was 3 mg% and the BUN 71 mg%. The urine volume was 1,470 ml per 24 hours, urine creatinine 0.74 grams per 24 hours, and renin 1172 units. Arteriography revealed stenosis of the renal artery at the site of anastomosis. (Fig. 6). The patient underwent resection of the stenotic area with reanastomosis. However, this resulted in complete thrombosis of the renal artery for which the patient underwent nephrectomy of the transplanted kidney. Following this, the patient returned to the chronic hemodialysis program to await a second transplant.

Special attention should be given to the treatment of the acute tubular necrosis and diuretic phase of the immediate postoperative period.

Acute Tubular Necrosis After Renal Transplantation

In patients transplanted with homograft received from cadaver donors, oliguria is the most common experience. Determination of the exact cause of this complication may be very difficult, considering that both acute tubular necrosis and rejection are by far higher in these patients than in those receiving kidneys from liv-

Figure 6

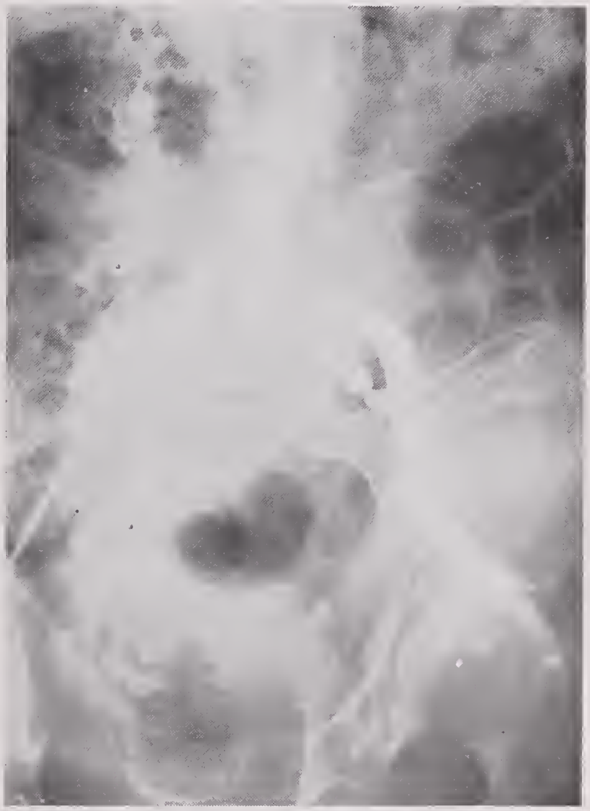


Figure 6. Arteriogram showing severe stenosis at the level of the renal-internal iliac artery anastomosis. (Case report #2).

ing donors. If rejection is ruled out, the management of the patients in acute tubular necrosis can be done by adequate administration of fluids and electrolytes, administration of diuretic agents and, when necessary, temporary hemodialysis.

Considering the ability of the kidneys to respond to diuretic agents when the cause of oliguria is due to acute tubular necrosis, mannitol, furosemide or ethacrynic acid should be tested, as suggested by Merril.[27] Anderson et al[1] reported five cases in which, because of difficulties in determining the cause of oliguria in the early postoperative period, furosemide and mannitol were administered to these patients, resulting in marked increase of the urinary output within two hours after the administration of these drugs. They suggested 50 to 100 mg of furosemide alone or combined with 25 gm of mannitol intravenously. If marked response to this administration is obtained, the diagnosis of acute tubular necrosis is most probable, and intravenous infusion of 100 mg of furosemide in 500 ml of 20% mannitol can be given at a rate of 4 ml per hour for 24 hours, and urinary losses must be replaced adequately. Ethacrynic acid should be avoided considering its ototoxicity as reported by Mathog and Klein.[26]

Polyuria following renal transplant is not unusual mainly in patients with marked edema or inadequate preoperative dialysis. Starzl et al reported a case of diuresis averaging 1.2 liters of urine per hour; this patient expired after 12 hours due to electrolyte imbalance. They suggest an empirical formula of fluid replacement administering only 50% of fluid lost when the urinary output is greater than 500 ml per hour.[33] The following narrative describes a patient in whom the urinary output was 21.3 liters during the first 24 hours.

Case Report #3

A 23 year old white male was referred

Figure 7

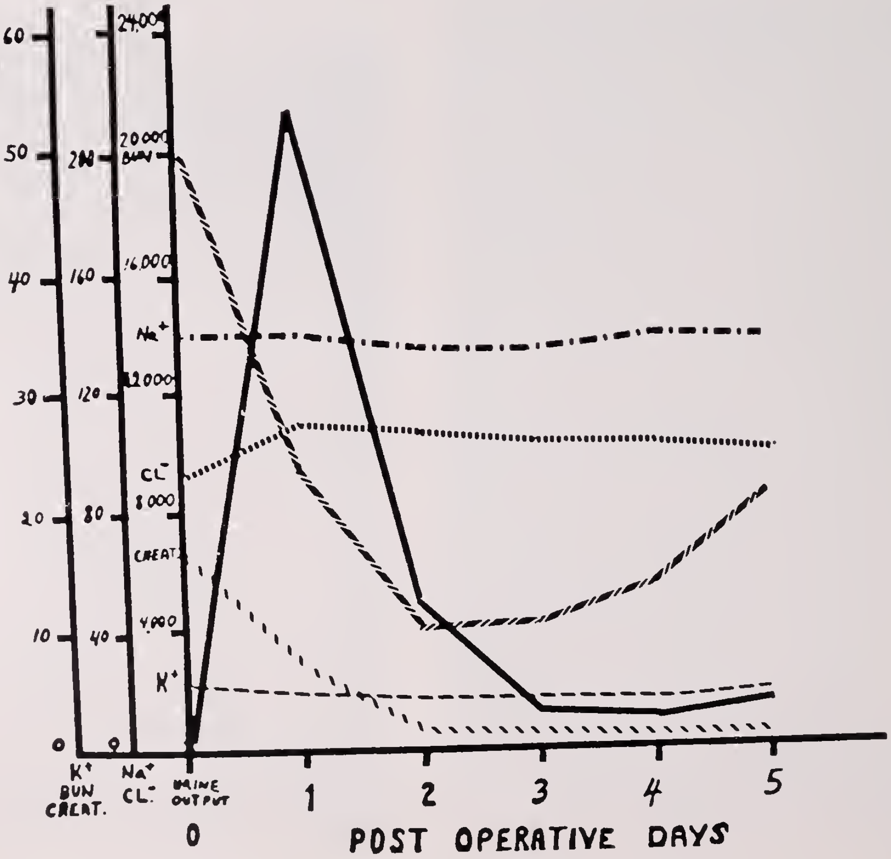


Figure 7. Recovery of urine function in early post renal transplant period, demonstrating massive polyuria. (Case report #3).

to the Deaconess Hospital, Buffalo, New York for evaluation on November 23, 1969 of end stage chronic renal failure secondary to chronic glomerulonephritis diagnosed three years prior to his present admission. The patient had been started on maintenance dialysis prior to transfer. Patient was placed on maintenance hemodialysis, and an arteriovenous fistula was created. The patient did poorly on hemodialysis, and it was difficult to control his fluid and electrolyte balance, especially hyperkalemia. On February 11, 1970 renal allograft transplant was performed. The patient's brother served as a donor. During the first 24 hours following transplantation, the patient had a urinary output of 21,360 ml and during this time the BUN came down from 51 to 24 mg%, and the creatinine from 16.5 to 5.9 mg%. The fluids administered to the patient were 21,300 ml of 0.45% normal saline with additional sodium and potassium to match the electrolyte losses. (Fig. 7). During the next 24 hours, the urinary output decreased to 4,850 ml. At this time, the BUN was 12 mg%, and the creatinine 1.6 mg%. The patient had an uneventful recovery. He received 200 mg of solumedrol intramuscular for 4 days, and this dosage was decreased gradually. Imuran was also administered in doses of 150 mg daily. On March 4, 1970, bilateral nephrectomy was performed, and he was discharged with good renal function on March 21, 1970.

Reappearance of the disease in the renal allograft is a subject of interest and at present, the following entities have been found to produce damage in the transplanted kidneys: 1. Antiglomerular basement membrane antibodies (anti GBM) reproducing glomerulonephritis in the allograft; 2. Soluble antigen-antibodies complex-induced nephritis, e.g., lupus nephritis; 3. Metabolic diseases, e.g. renal tubular acidosis.[22] Glomerulonephritis was known to reproduce the disease in renal allograft even before anti-GBM (glomerular basement membrane) antibodies determinations were done. Murray and Harrison[29] reported a case in which glomerulonephritis appeared in a transplanted kidney from one identical twin to another who had the disease. Hume et al[11] had a case of glomerulonephritis developing in an allogenic cadaveric kidney transplanted to a patient with periarteritis nodosa. Hallenbeck et al[9] reported another case of similar situation in which the transplanted kidney was found with changes compatible with the histology of the original disease. In all these patients, anti-GBM antibodies were not determined.

Recently, emphasis has been placed on the detection of antiglomerular basement membrane antibodies in patients with glomerulonephritis considering the possibility of recurrence of the original disease in the allograft.[4] Whenever active glomerulonephritis is suspected clinically, renal biopsy is mandatory for the detection of anti-GBM antibodies. Proliferative changes in the glomeruli and demonstration of deposits of gamma globulin by fluorescence microscopy, as well as the presence of anti-GBM antibody in the serum of patients, will contraindicate transplantation. Other methods of detection of GBM antibody must be carried out, when available, to demonstrate activeness of the disease and avoid failure of the allograft.

Preoperative detection of the circulating anti-GBM antibody can be rarely demonstrated, but high titers are often reached post-nephrectomy. If the GBM is found in the recipient, renal transplant should not be performed until the circulating antibody disappears, usually within 6 to 12 months from the time of the nephrectomy.[13] Further experience to assure that recurrence of the original disease will not occur is to be demonstrated. That patients with lupus nephritis can develop the original disease in the allograft has been demonstrated by Lerner et al.[19] In one patient in the Stanford University series,[22] transplanted for possible lupus nephritis, massive persistent proteinuria developed. Biopsy of the transplanted kidney revealed focal glomerulonephritis and a "lumpy" pattern of glomerular IgG deposition characteristic of soluble antigen-antibody complex-induced disease.

Metabolic disorders can also lead to progressive damage of the allograft. Lucas et al[22] reported two patients with renal tubular acidosis, Fanconi syndrome demonstrating deterioration of the renal function after they had received a kidney from a related donor. These patients did not show signs of renal tubular acidosis. However, the renal function deteriorated abnormally in comparison with other patients with similar patterns of histocompatibility matching. Persistent hypertension developing soon after transplant was another feature of both patients suffering from cystinosis. Kidney biopsy of the allografts showed nephron loss, interstitial edema, and fibrosis and moderate infiltration with lymphocytes, plasma cells and blast cells. The glomeruli showed mild to marked membranous and proliferative changes, and one biopsy demonstrated intracellular deposits of cystine crystals. It is possible that the time lapse since transplantation was not sufficient for the development of the characteristic changes of the renal tubular acidosis. Nevertheless, the fact of rapid deterioration of renal function in the transplanted kidney as well as the presence of abnormal hypertension must be considered when patients with Fanconi syndrome are evaluated for transplantation.

Immunosuppressive Treatment and Homograft Rejection

Immunosuppressive Treatment: Different methods of immunosuppression have been described; nevertheless, almost universally the homograft rejection is prevented with steroids, azathioprine (Imuran) and antilymphocytic globulin (ALG).

Steroids are prescribed in massive doses during the first few days post-transplant, and then decreased to a maintenance dose in conjunction with azathioprine in doses of 3 to 5 mg per kg per day. ALG is administered, when available, in doses of 4 mg per kg per day in divided doses.

In our service, we manage our post-transplant patients with Solumedrol at a level of 4 mg/kg/day, with a maximum of 300 mg/day, for 3 to 4 days, followed by a gradual decrease to a maintenance dose. This latter dose may be approximately 6 mg of medrol every 12 hours after 20 to 30 days, in the absence of evidence of rejection. Azathioprine is administered in doses of 4 mg per kg per day from the day prior to transplantation, and is gradually reduced until reaching levels that insure good immunosuppression as measured by WBC depression below $3{,}000/mm^3$ and total lymphocyte count below 600 without causing marked inhibition of leukocytes and platelets formation. Other methods of immunosuppression have been reported in the literature. Shorter et al[36] reported good results with the horse antihuman thymus serum (HAHTS), either in patients receiving kidneys from living donors or cadavers when given only as adjuvant to azathioprine or prednisone. The immunosuppressive effect of thoracic duct drainage in human kidney transplantation, decreasing the immunologic response of the recipient from genetically related donor, has been studied by Tilney,[42] and the recovery of this immune responsiveness after cessation of the thoracic drainage has been evaluated in calves by Graber.[8]

Table 5

TECHNIQUES OF IMMUNOSUPPRESSION

1. Reduction of Antigenic Disparity	Tissue typing
2. Lymph damage:	
a. X-ray therapy	Whole blood radiation Extracorporeal radiation Local graft site radiation
b. Drugs	Mercaptopurine Actinomycin Azothioprine (Imuran) Cytoxan
3. Lymph depletion	Thoracic duct Thymectomy ? splenectomy
4. Efferent inhibition	Corticosteroids
5. Immunologic Procedures	Antilymphocyte globulin Blocking antibodies Tolerance induction

Administration of x-ray therapy to the transplanted kidney in the immediate postoperative period and on two more occasions during the following postoperative days when the invading lymphocytes are not sensitized, is recommended by Jonasson.[13]

Splenectomy has been evaluated in primary renal allograft and in patients receiving second transplant. It has been found to improve markedly the functional survival of the latter group if the cause of failure of the first transplant was rejection.[34] Table 5 outlines all the techniques of immunosuppression known up to date.

Homograft Rejection

One of the unsolved problems in kidney transplantation is the prevention and management of the rejection crisis. Rejection may occur at the very early stage, and many times these episodes develop in patients already discharged to the renal clinic for which the recognition of this condition cannot be made during the initial onset.

The immunologic response of the recipient to a foreign tissue includes an afferent component or sensitization and an efferent component or homograft reaction. This latter process includes the formation of the enlarged lymphocyte which becomes strongly pyroninophylic taking the appearance of blastoid cells. The blast cell undergoes multiple division ending in the small lymphocyte or effector cell. The ordinary rejection reaction results when the small lymphocyte population of the host invades the foreign graft and by some as yet unknown mechanism destroys it. In contrast, hyperacute rejection is not related to cells but rather to humoral antibody, as when there is an ABO incompatibility.[13, 35] A crisis of rejection can be suspected when the following signs are present: elevation of the temperature, pain and/or tenderness of the transplanted kidney area, marked decrease in urinary output, and rise in arterial pressure. The laboratory usually reports leukocytosis, elevation of the BUN and creatinine, decrease in creatinine clearance, hypochloremic acidosis, and sometimes marked anemia. Decrease in the production of the erythropoietin hormone and increase of renin level have been reported to correlate with a rejection reaction. The most consistent evidence of rejection is presented by elevation of the BUN, elevation of the serum creatinine, and decrease in the clearance of the creatinine. Dossector[23] considered 4 categories of immunological rejection based on the changes of concentration of serum creatinine. In Class I rejection, the serum creatinine goes up by a factor of 4; a Class 2 rejection, when the serum creatinine goes up by a factor of 2; a Class 3 rejection exists when the creatinine goes up by a factor of 1.5 to 2; and Class 4 is an increase of less than 50%.

The severity of the rejection is assessed during the first three months post-transplant, during which time determination of Dossector's "rejection index"[23] is of utmost prognostic importance. The rejection index was calculated by assigning numerical values to each class of rejection as follows: Class 1 was assigned a value of 12 for each crisis of rejection; and Classes 2, 3, and 4 assigned values of 6, 3, and 1 respectively. The total numerical number for the first three months is divided by 3, if the patient is alive, resulting in the "rejection index." According to Dossector, no patients survived for more than six months if the rejection index exceeded five.

Treatment of Homograft Rejection Episodes

Acute rejection is best treated by increasing doses of steroids often to a level of 5 mg per kg per day for a short time. Imuran doses are usually reduced, considering the renal clearance is reduced as well as the clearance of the azathioprine. If the above mentioned attitude does not improve the rejection crisis, local irradiation is mandatory, to destroy the lymphocytes accumulated in the renal parenchyma of the graft.[14] However, considering that the most susceptible lymphocytes to irradiation are those nonsensitized, it seems logical to administer radiation therapy only in the very early phase of the rejection reaction.

Actinomycin D is a drug of very high toxicity, and its use must be carefully evaluated. It is not recommended for general use at this time.

Antilymphocyte serum produces marked immunosuppression in certain animals; nevertheless, its effect in man is much less convincing. The mode of action of this immunosuppressive drug is not well understood; however, hypotheses have been postulated. That lymphopenia is the result of the destruction of the lymphocyte population caused by the antilymphocyte serum is the most acceptable hypothesis.[3]

The use of anticoagulants together with dipyridamole has been postulated to prevent thrombosis of vessels in acute rejection and to minimize the narrowing of the vessels occurring during the so-called chronic rejection in kidneys transplanted from cadavers.[16] Mild episodes of rejection can be managed by increase doses of steroids, giving the patients 1 gm of Solu-cortef intravenously, followed by 500 mg and 250 mg of Solu-cortef during the next consecutive days. If no response is obtained, local radiation therapy is prescribed administering 150 rads of cobalt 60 on alternating days for 3 to 4 sessions. Azathioprine doses are modified only if necessary according with the degree of oliguria and the white blood cell count. In some cases, post-transplant radiation therapy is given to patients in the immediate postoperative period to minimize the possible rejection and to reduce doses of steroids.

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Unlock the Door on Youth Problems: The Adolescent from Eleven To Sixteen Years*

PART II

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Third Area of Endeavor

Independence-Dependence-Interdependence

The teenager has the problem of independence and over-dependence.[3] There is difficulty in separating himself from parents and other types of authority. The problem of shifting mores in society, the weakening of the family unit, and parental uncertainty between permissiveness and strictness help in undermining authority and parent-youth relationships. Some resolution of these problems is necessary in present day society before these relationships have much opportunity to improve. There may be a certain amount of rebellion within the family in order to become independent of the family and the family rules. There may be a lack of acceptance of limitations of activities either within the school confines or within the community confines. The adolescent has to learn to become dependent upon himself and not be too dependent upon other people. At the same time he must learn to rely upon other people's help and facilities to further his own endeavors. He must learn to accept the endeavors and help of other people and to understand the importance of the reciprocal relationship of love in the broad sense of the term.

The adolescent may set up straw men (parent images) to fight with in order to ease the pain of separation from home and his family. The false premise is that the separation is more readily acceptable if the family is anxious for the adolescent to leave home, and that the family is less apt to hinder the teen's leaving. If the family unit is too warm and comfortable, it is harder for the teenager to leave home for the external world of intense competition. The direct opposite should be true if the family unit has really performed its job of preparing the adolescent for this major step of developing independence, dependence, and interdependence.

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Teachers and coaches can aid the teenager in this reliance in his trust of other people, especially in the areas of handling competition either scholastical or in sports.

The teenager will experience many adaptations to his peer group relationship. He has a feeling of love and he has the feeling of dislike or hate; he has the feeling of healthy anger and he has the management of unhealthy anger; he has to develop the feeling of manliness or womanliness; the problem of managing sensual love and understanding tender love; and the problem of being overly secretive and hiding too many things from too many people or the problem of naivety. Sometimes, the youth is so open-faced about many things that he is the brunt of unpleasant experiences and jokes. People may take advantage of him. Occasionally, a youth may have been so hurt by some of life's experiences that he will not communicate or trust anyone for a long time.

There is the problem of too much socialization at too early an age. This problem is a big one today and is a major cause of many teenage difficulties. This problem has been explored in detail in an earlier paper.[4]

Fourth Area of Endeavor

Economics of Junior High School Life

There are certain economic problems in the junior high years which are apparent. This involves family funds and the cost of going to school. A youth's activities now consume a large share of the family dollar. The type of clothes which they wear and the fads which they wish to indulge in necessitate a changing wardrobe. What they do within the church sphere, whether this be participating in church activities or by donations to church support, usually involves some monetary outlay. Their own entertainment, going to shows, buying records, stopping at a hamburger stand, getting a malt —all of these activities entail an outlay of a certain amount of money. Can they hold a job? Can they raise money? Can they afford to do the things that they wish to do, or does it take too much time from their academic pursuits or put them into an unhealthy situation? This economic facet creates some rather unpleasant situations, especially if the adolescent has to depend on a family dole system or has to ask for each need separately. Some type of financing system which is equitable to all and involves retaining self-respect should be devised. In the consultation room, the author has encountered much bitterness over this very problem. Some adolescents become so adamant about money matters they work very unreasonable hours and sometimes take unhealthy job situations merely to be independent of the family purse strings. Solutions to this economic problem hinge upon job opportunities which are available for this age period such as paper routes, baby-sitting, lawn jobs, or a family allowance system which has built-in responsibilities for budgeting and planning for school, church, and entertainment expenses. As these areas are handled satisfactorily, the inclusion of some clothing expenses might be included in an enlarged allowance to develop the ability to wisely handle larger amounts of money. The parents may construct paying jobs within the family unit or a job at father's or a relative's place of business in lieu of an allowance. These methods help promote self-esteem and independence. The entire problem of job opportunities, child labor laws, community resources, and teen population density are important facets to this problem of youth's economics.

Fifth Area of Endeavor

The Spiritual and Identity Crises of Adolescence

The years of 13-16, by and large, are the most miserable and challenging in a teen's life. He has to cope with very fluctuating moods. They are very confused about their own moral beliefs and their own spiritual beliefs.[1] They have a number of self-conflicts. These conflicts involve several areas. Their religious ideas bother them. Do they believe in God or do they not? Is there spiritual guidance in their life or is there not? How do they cope with the differences in moral beliefs at home and away from home? How do they identify with their own sex gender? How do men act? How do women act? What does it mean to be masculine or feminine? What about the problem of the "sissy" and the "tomboy;" and the girl who wants to compete against masculine pursuit or the boy who runs away from any type of masculine endeavor? The structured church is not giving enough support to youth at the present time in the resolution of these questions. Adolescence has always been an age of doubting and questing for answers. Even though the youth has problems in accepting formal religion and in defining his own working concept of God and his beliefs, he is fairly strong in how he practices his beliefs and his relationships with his fellowman. The author endeavors to help the youth resolve some of his conflicts and doubts by his personalized Anticipatory Guidance Program and his Teen Talks.

Sixth Area of Endeavor

Cultural Changes That Are Present

How does the teen cope with the ever-increasing problem of drinking, and the subsequent hazards of driving a car or acute alcohol poisoning? The freedom obtained by driving is a great adaptation. The drug usage situation is an ever-expanding problem, as demonstrated by the avalanche of news items.

Success for a boy usually means athletics instead of scholastic accomplishments. This situation is unfortunate. For a girl, success means popularity with a boy. There is the problem of the cultivation and the consolidation of concepts of self-discipline. By the time this individual leaves the adolescent formative years, he must have a good sense of self-responsibility and self control, so he can take his place in society as a mature adult. The youth of today must learn to adapt to racial conflict and organized movements of rebellion against the establishment. These are very difficult tasks.

All adults need to take a much greater personalized interest in the individual child. We need to learn "to read" the youth as far as the youth's own individual needs may be. We need to learn to understand the youth's use of his language and what he is really saying and implying when he makes any kind of a statement or a sentence; we need to learn what his likes are, what his dislikes are; what his true feelings are so that he can gain some help when needed. Above all, there needs to be a greater awareness and a greater enlightenment by adults into the needs of cultivating necessary leadership in these formative years and not leave it all to the coaches or one or two interested school authorities.[1]

For the past 19 years, the author has been engaged in a program for his adolescent patients and their parents to encompass an anticipatory guidance program incorporating mental health values and society responsibilities. This guidance program covers six main areas of development in children and youth.

1. Personality and Emotional Development
2. Sex Education
3. Physical Development
4. Intellectual Development
5. Philosophy of Discipline
6. School Adjustments and Adaptations

This program seeks to develop a parent attitude and family environment which helps the child and youth to learn about themselves, to evolve an understanding of his own strengths and weaknesses, and to constructively help the young adult cope with the many problems and decisions confronting him.

When the child enters the 8th or 9th grade, he is invited to attend the author's "Teen Talks," which are given annually for the author's own patients and at no charge. The "Teen Talks" are given in the following sequence and are entitled:

A. YOU AND THE BODY GOD GAVE YOU.

The child and parents both attend. The material covered encompasses nutritional needs, personal hygiene, body systems, growth changes of adolescence, the hormone system, and the reproductice system of both sexes. Blackboard and charts are used followed by a question and answer period. Both sexes attend.

B. FAMILY, FRIENDS, AND SCHOOL.

The child and parents attend. The material covered outlines the areas of responsibility for parents and for the child. The value and understanding of picking and choosing friends is covered plus the role of school. School in its total role, not just th specific academic subject learning role. A question and answer period follows. Both sexes attend.

C. GIRLS ONLY NIGHT.

The girls attend alone without parents. The material covered includes the relationship of daughter and mother in the home. Preliminary discussions of dating, dress, drinking, drugs, and venereal disease. A prolonged question and answer period follows.

D. BOYS ONLY NIGHT.

The same format as for the GIRLS ONLY NIGHT.

E. PARENTS ONLY NIGHT.

A general discussion of the general growth and developmental changes of adolescence is given plus sample questions of previous years' BOYS AND GIRLS ONLY NIGHTS, not the current year's questions for obvious reasons. A prolonged question and answer period follows.

These talks are held in the author's office on Monday evenings and last from 7:30 p.m. to 9:00 p.m. so the child may return home in time for school preparations for the next day. This series is given in the fall of each year and reminder cards are sent to the families from compiled office lists.

5. For the adolescents in the 10th, 11th, and 12th grades, "Teen Talks" are also given. These talks are given in the early spring of the year. Both sexes attend, but no parents.

A. DATING AND RELATED SOCIAL BEHAVIOR.

This talk is for the teens only — both sexes — not their parents. It covers the 5 D's of Adolescent Problems: DATING, DRIVING, DRINKING, DRESS, AND DRUGS. A question and answer period follows each talk.

B. CAREERS AND HOW TO PLAN THEM.

This talk covers the general ideas of how to approach thinking about any career and is designed to help the adolescent to look at himself with intraspection as to his own needs, values, abilities, and short comings.

C. MARRIAGE AND ITS RESPONSIBILITIES.

This talk covers the general responsibilities of marriage and family life, the roles of husband and wife, and mother and father.

D. COLLEGE IN GENERAL.

This talk covers some of the necessary aspects of how to look for a college — location, size, type, specialties, dormitory life, and sororities and fraternities. Some aspects of college life, study approach, and related items are covered.

E. HOW TO HANDLE YOUR EMOTIONS.

Love — Anger — Fear — Depression — Suicide.

This talk covers basic information about feelings, how to recognize these feelings, and methods to handle them.

6. In addition to the above listed "Teen Talks," the author conducts his practice on an annual review basis with a great deal of dialogue with the youth and gives individualized advice and instruction to the teen at each yearly visit covering items as personal hygiene, school progress, parent relationship, society relationship, peer groups, school activities, and related areas.

This total youth approach is an effort to aid the adolescent into "BECOMING" more fully in the total extent of his intellectual, emotional, and physical development. The author is preparing for publication a manuscript reporting in detail the total continuum of the philosophy of "Guided Growth" as applied to a working general pediatric and adolescent practice.

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Cancer Metastatic to Cancer— Metastasis to a Lymph Node with Lymphocytic Leukemia: A Case Report

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Summary

Cancer metastatic to cancer is an infrequently reported occurrence. This report documents squamous cell carcinoma of the lip metastatic to cervical lymph nodes involved by chronic lymphocytic leukemia. Leukemia-lymphoma and renal cell carcinoma are the two most commonly reported recipient cancers.

THE simultaneous or subsequent occurrence of primary malignancies in the same patient involving different tissues is no longer considered rare. However, metastasis of cancer to cancer has been reported less frequently. This report documents squamous cell carcinoma of the lip metastatic to leukemic cervical lymph nodes.

Case Report

A 55-year-old white male presented in July, 1967, with complaints of weakness and malaise of several months' duration. Physical examination revealed generalized lymphadenopathy most prominent in the inguinal and cervical regions. The liver and spleen were not palpably enlarged. A blood count revealed hematocrit, 44%; hemoglobin, 14.8 gm%; reticulocytes, 1.3%; white blood cell count, 33,350/mm^3 with 11 polymorphonuclear leukocytes, 4 eosinophils, 3 monocytes, and 82 mature-appearing lymphocytes. Examination of the bone marrow revealed a diffuse infiltration by mature lymphocytes comprising approximately 60% of the marrow elements. A diagnosis of chronic lymphocytic leukemia was made.

Treatment consisted of Leukeran® 2 mg/day. The hemogram returned to satisfactory limits and has remained stable since that time.

In July, 1969, on the removal of two carious incisor teeth, a 1 x 1 cm hard nodule was noted beneath the mucosa of the upper lip. Excisional biopsy was subsequently performed. Microscopic diagnosis was "Squamous cell carcinoma, spindle cell type, primary in the lip." The line of excision appeared to pass well around the lesion. At that time a white blood cell count was 10,000/mm^3 with 65 lymphocytes, 33 polymorphonuclear leukocytes, and 2 monocytes. The hemoglobin was 12.2 gm%.

Six months later a 1 x 1 cm recurrent nodule was noted in the upper lip at the site of the previous excision. In addition a 2 x 2 cm mass was palpable in the right cervical region. The lip lesion was re-excised during the right-sided radical neck dissection. The microscopic diagnosis was "recurrent squamous cell carcinoma of the lip with metastasis to two leukemic cervical lymph nodes." Eighty - three other

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leukemic lymph nodes from the radical neck dissection were examined at that time without microscopically demonstrable evidence of metastatic carcinoma. The patient received postoperative radiation therapy (See Figures 1, 2).

In June, 1970, a left-sided radical neck dissection was performed after a 2 cm nodule was found at the angle of the left jaw. The microscopic report was again spindle cell carcinoma, metastatic to leukemic lymph nodes.

Throughout the 2½ years since the initial diagnosis of chronic lymphocytic leukemia, Leukeran® 2 mg/day has been maintained.

Discussion

Campbell et al[1] reviewed the literature on the subject of metastasis of cancer to cancer. He noted five cases of proven metastasis of a second cancer to "lymph nodes involved with leukemia or lymphoma."

Woolam et al[2] presented a sixth case, and further noted the apparent rareness of this occurrence.

Moertel[3] at the Mayo Clinic presented a large series of concomitant leukemia and carcinoma but did not specifically discuss the occurrence of metastasis to the leukemic lymph nodes.

In several reports, renal cell carcinoma[2, 4, 5] and leukemia were the two most common receptor cancers for metastatic carcinoma. Renal cell carcinoma was the recipient malignancy in 62% of the cases in one series while leukemic lymph nodes were the recipient in 8%.[1, 3]

This case is interesting for two reasons: its apparent rareness and the appearance of the squamous cell carcinoma during a clinical remission of the chronic lymphocytic leukemia.

Watson[4] discussed the body's potential protection from an occurrence of a second primary malignancy by the presence of the first neoplasm. His study concluded that there has been no statistical basis established for this conclusion. In addition, the suggestion that the first tumor's presence facilitates the development of the second, seems to be without statistical basis.[4] Further questions can be raised concerning the relationship of the therapy for leukemia and the appearance of the metastasis of the second primary.

Since the leukemia presumably occurred first, the presence of metastatic epithelial tumor cells in the leukemic cervical lymph

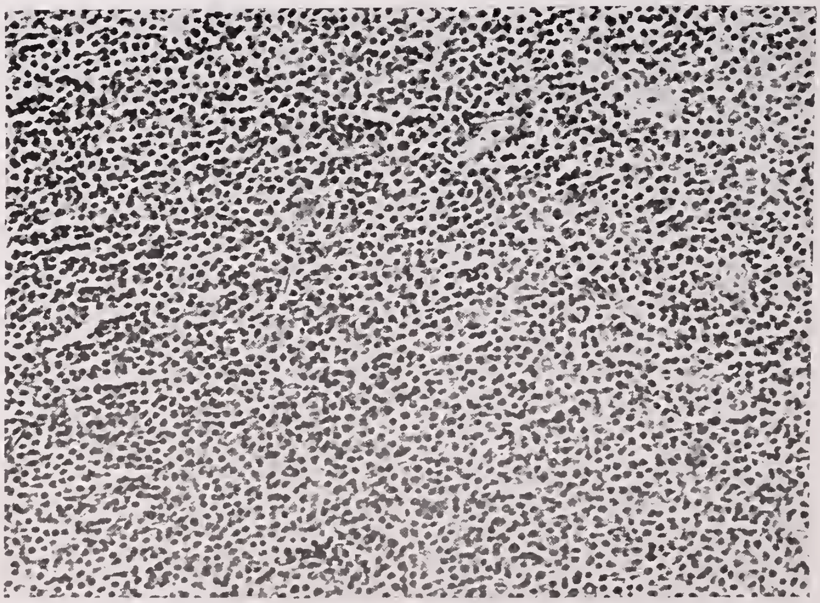

Figure 1. Cervical lymph node showing a diffuse infiltration by well-differentiated lymphocytes.

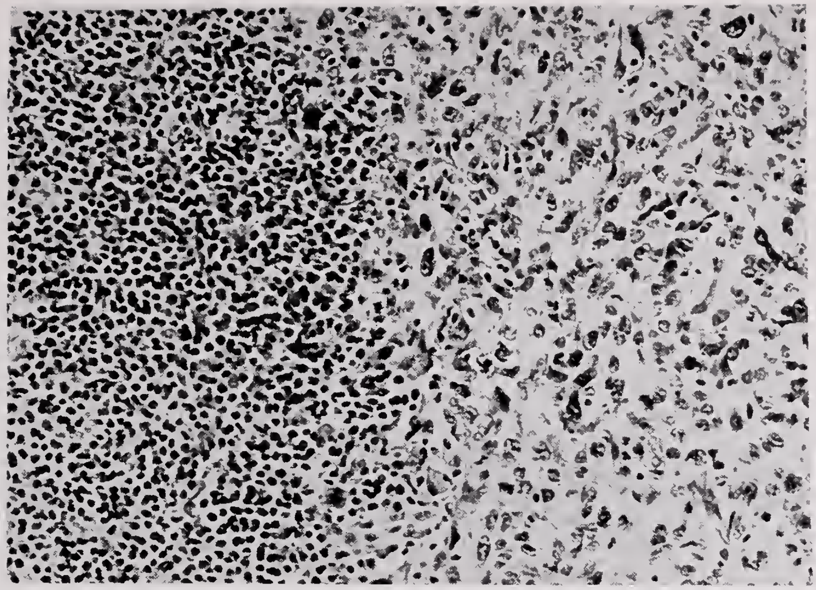

Figure 2. Lymph node showing diffuse replacement by well-differentiated small lymphocytes (left) and metastatic spindle cell carcinoma (right).

nodes suggests the presence of intact lymphatic channels entering the leukemic nodes.[2]

Conclusions

Carcinoma metastatic to leukemic lymph nodes has been documented infrequently. It appears to be less common than metastasis to renal cell carcinoma.

It is important to re-emphasize the necessity of investigating each palpable lymph node in cases diagnosed as leukemia for the possibility of the development of a second cancer which has metastasized to those lymph nodes.

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Highlights of Auscultation in Acquired and Congenital Heart Disease-II*

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The Pulmonary Orifice

THE midsystolic murmur of isolated congenital valvular pulmonic stenosis is typically loudest in the second left intercostal space and radiates upward and to the left. The length of the murmur varies directly with the degree of obstruction so that in mild pulmonic stenosis the murmur ends before *both* components of the second heart sound, whereas in severe pulmonic stenosis the murmur goes through aortic closure but necessarily ends before the delayed, soft or inaudible sound of pulmonary valve closure. The murmur is introduced by a pulmonic ejection sound which often distinctively waxes with expiration and wanes with inspiration. Severe obstruction is associated with powerful right atrial contraction which distends the right ventricle in presystole and in so doing generates an atrial or fourth heart sound. Specific attention should be called to the systolic murmur that accompanies stenosis of the pulmonary artery and its branches, a congenital malformation that often follows maternal rubella. These murmurs are widely distributed in the right chest, axilla, and back, and must be sought by auscultation at nonprecordial sites during quiet respiration.

When one speaks of pulmonary regurgitation, the high frequency blowing Graham Steell murmur comes to mind. However, pulmonary regurgitation may occur without pulmonary hypertension when there is a congenital or acquired anatomic defect of the valve itself, and this murmur differs from that of Graham Steell. The murmur begins at an interval after the second heart sound, is crescendo - decrescendo in shape, ends well before the next first heart sound, and is low to medium pitched since a low diastolic pressure in the pulmonary trunk results in a low rate of regurgitant flow.

The Atrial Septum

Atrial septal defect can be one of the most readily diagnosed congenital anomalies of the heart although from an auscultatory point of view, the malformation is often overlooked because of the relatively inconspicuous murmur. It should be borne in mind that the *defect itself* is acoustically silent and the shunt is diastolic; when the right ventricle ejects the large stroke volume accumulated in diastole, a relatively short grade 2 - 3 pulmonic systolic murmur is generated. The right ventricle takes longer to expel its large stroke volume so the second component of the second heart sound (pulmonary closure) is delayed; furthermore, the physiology of the circulation in atrial septal defect results in *fixed* splitting of the second heart sound which means that the split remains unchanged during respiration.

The soft systolic murmur of atrial septal defect may be mistaken for an innocent systolic murmur, especially in children. However, the usual innocent murmur is a vibratory, buzzing, pure to medium frequency event that is best heard along the lower sternal edge and toward the apex and is accompanied by *normal* splitting of the second heart sound. In addition, *complete right bundle branch block* is associated with *wide* splitting of the second heart sound but usually not with *fixed* splitting and hence can be distinguished from the wide fixed splitting of the atrial septal defect.

The Ventricular Septum

The typical holosystolic left sternal edge murmur of ventricular septal defect is well known. Progressive pulmonary hypertension decreases the left to right shunt and shortens the murmur; when the shunt is reversed (Eisenmenger's Complex), the murmur through the defect is abolished. It is important to recognize that an early systolic murmur can *also* occur with *very small* nonpulmonary hypertensive ventricular septal defect in which the shunt is interrupted in latter systole. Such murmurs are soft, pure, high frequency, and quite localized at the mid to lower left sternal edge; as time goes on these murmurs may disappear because of spontaneous closure of the defect.

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Fallot's tetralogy — the commonest cyanotic congenital cardiac defect above age 4 years — has been taken to represent a large ventricular septal defect upon which varying degrees of pulmonic stenosis are imposed. Progressive right ventricular outflow obstruction decreases the left to right interventricular shunt and shortens and finally abolishes the holosystolic murmur leaving an isolated midsystolic murmur of pulmonic stenosis. As obstruction increases further, right ventricular blood is shunted through the ventricular septal defect into the aorta; accordingly, pulmonary flow decreases, cyanosis increases, and the pulmonic stenotic murmur progressively shortens and softens disappearing completely with pulmonary artesia.

The Great Vessels

When an uncomplicated patent ductus arteriosus joins the great vessels, a characteristic continuous machinery murmur peaks around the second heart sound and is maximal at the left base. Several words of caution are appropriate. Occasionally a loud venous hum in young children transmits below the clavicles and is mistaken for a patent ductus arteriosus; this error can be avoided by compressing the deep jugular veins, a maneuver that abolishes the hum. In large patent ductus, progressive pulmonary hypertension decreases the left to right shunt so that the continuous murmur shortens, then becomes systolic, and when the shunt is reversed, disappears entirely. At this point, the recognition of patent ductus does not depend upon auscultation; instead, the presence of differential cyanosis (blue toes and pink fingers) makes the diagnosis.

The Myocardium

Hypertrophy — Increased force of atrial contraction usually distends a hypertrophied ventricle in presystole. Atrial or fourth heart sounds accompany the presystolic distention and are useful signs of hypertrophy such as in aortic stenosis or systemic hypertension on the left side and pulmonic stenosis or pulmonary hypertension on the right. In the pulmonary hypertension of emphysema, the fourth heart sound is often heard in the epigastrium since all of the heart sounds — including a loud pulmonary closure sound — are damped because of the large anteroposterior chest dimensions.

Failure — Third heart sounds are normal in children and young adults but pathologic in older subjects. Ventricular failure is a common cause of abnormal third heart sounds and should be specifically sought with light touch of the stethoscopic bell in all patients in whom heart failure is suspected. It is a point of interest that the effect of cardiac infarction on the left vetricular myocardium commonly results in the need for an increased distending force that is provided by augmented atrial contraction; fourth heart sounds are prevalent in this context.

An ischemic left ventricle may take longer than normal to eject so aortic valve closure may fall *after* pulmonary closure causing reversed or paradoxical splitting of the second heart sound. The commoner cause of paradoxical splitting however is left bundle branch block or a right ventricular pacemaker which is its electrical equivalent.

Constriction

Myocardial constriction — as in constrictive pericarditis — results in high atrial pressures and rapid flow into nondistensible ventricles. Under these circumstances, loud early third heart sounds occur and have been called "early diastolic sounds" of constrictive pericarditis. Similar sounds occur in the restrictive form of primary myocardial disease.

Summary

Modern instrumentation has not eclipsed the need for sophisticated auscultation. On the contrary, clinical research has gone far in clarifying the meaning of auscultatory events in acquired and congenital heart disease and has increased the value of the stethoscope as a clinical tool.

President's Page

Our country's social planners over the past few years have created a slogan — cliche if you will — to promote their programs. "Health care is a right" is heard throughout our land. The phrase seems, on the surface at least, to be on par with motherhood and the flag so little in depth evaluation of it has appeared in print. Perhaps the NSMA should do this now.

First, it is important that physicians distinguish between health care and medical care. As *physicians,* we are responsible only for medical care including both our own services and those of others acting under our direction. As *citizens,* we are concerned about all of the broader aspects of health care including education, nutrition, environment, recreation, etc., and in our practices we may utilize any or all of these various fields. Though we can probably agree that medical care is a component of health care, I would hasten to add that it is a clear identifiable component and not to be lost in the morass of thought embracing the broader concept of health care.

When we talk of health care as a right, we must also talk of the responsibility that goes with it. The physicians of this and the other 49 states have amply demonstrated their willingness to provide increasingly better medical care as new scientific discoveries are brought forth. All of us realize our patients still suffer from many infirmities for which we have no answer as yet, but also a great many today enjoy healthy productive lives who would have died prematurely a few short years ago. Many people no longer ask "Doctor, can you help me?" but instead ask, "Doctor, why aren't I well yet?" As physicians we have made great strides but still failed to keep pace with the insatiable appetite of the public for perfect health. Too many times health care as a right carries the connotation that our patients have the right to be free of *all* disease and infirmity *now* whether possible or not. If this ideal state of utopian medicine is not possible, why? What is the reason in this day of wonder drugs, vaccines, and organ transplants we still cannot eradicate all the world's disease?

I think the reason is that the public so far, while accepting health care as a right, have failed to realize the existence of a corresponding responsibility. All of medicine's capability cannot compensate for the patient's careless expenditure of his physical resources. Lack of exercise, overeating, and drug abuse are all examples of lack of individual responsibility for individual health. Also, while health care is a right, it is the patient's responsibility to seek that care.

Health care is a right, but it can only be enjoyed when accompanied by responsibility.

Roger Mason, M.D.
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Medical Association

Civil War Diary

I have had the opportunity to examine a copy of the diary of A. E. Linn, M.D., who was a physician during the Civil War. The original, which I also saw, is all but illegible, but Mrs. Linn, the wife of Doctor Linn's grandson, kindly allowed me to read the copy, made only with great diligence and with the aid of a magnifying glass.

I have reproduced parts of Doctor Linn's wartime diary so that you might share my pleasure. The excerpts are not in chronological sequence, but there is no need to string the fragments together in any order. The last entry printed here was the final paragraph in Doctor Linn's diary.

I am indebted to Mr. and Mrs. Linn for this rare chance to see what medical practice was like with the Union Army, and I hope you will enjoy reading the story told by somebody who was there.

—F.C.

Doctor Alexander E. Linn was born in 1826, and received his preparatory training at Tuscarora Academy, Pennsylvania, and his M.D. from Jefferson College, in Philadelphia, in 1847.

He practiced medicine in Perry Court, Pennsylvania until the Civil War, and then served as Surgeon of the 207th Regiment of the Pennsylvania Infantry.

He moved to Nebraska in 1887, but after a few years returned to Pennsylvania, where he died in 1902. Doctor Linn felt the need to administer to the spiritual as well as the physical needs of man. He died as he lived, full of faith and hope, and an inspiration for good and holy living.

Mr. and Mrs. Avery Linn

Today I was assigned to conv. camp in charge of 1st, 2nd and 5th wards. I examined and prescribed for 85 this eve. I examined about 100 and sent about 35 to the Reg.

I considered it a case of spino-meningitis. I bled him freely and gave him a dose of physic.

Today we sent off all we supposed were fit for Regiment. Some were anxious to, but others became very lame and sick when Regiment duties were proposed.

I have a case of tetanus resulting from wounds. He has been kept quite easy by whiskey and chloroform. He continued quite easy until this morning at 7 o'clock. I stepped into the ward and while the nurse was giving him chloroform he expired at 7 o'clock. My duties in the ward today have been common, taking up most of the day. We had a medical inspector visit us today. Some of us will get a black mark, and some of us, I suppose, a white mark. I saw another leg taken off today without the patient being aware. Chloroform is one of the greatest blessings we have in the army.

Paid 20 cents for ½ dozen eggs, 25 more for some poor cheese, 25c for a pie, 5c for pint of milk. This was bought for a sick man.

I was assigned to cases in the 8th and 9th ward of the convalescent hospital. I found it no small duty to prescribe for 100 patients wounded and bruised.

Last night there was one of our guards killed. Cause alcohol leading to abuse. The immediate cause of death was a rupture to the tissues of spleen.

One of my patients shot through the thigh has been in danger of inflammation. I have another who is shot through from the edge ribs to the right of the stomach to the lower angle of the right scapula. Another patient a gunshot through the right side. Another through the right side and left arm. Tetanus begins to show itself. It has been controlled to some extent by whiskey.

130 men were sent to their regiments today. It is a very unpleasant duty to mark

a man for his regiment when he thinks he should not go. The duties of a physician in the army are very important, yet they are often passed over as if of no importance at all.

Today I was obliged to report two deaths in my ward. One of typho malaria and one of dysentery. I took a bullet out of a man's shoulder.

This A.M. I feel quite ill. A pain in my head, diarrhea, etc. Have taken two doses of quinia. Word comes today that we shall not be paid until Monday. Great patience is still required in the service.

The Fifty-Year Pins

To the Editor:

I was born on a farm near Elm Creek, Nebraska, August 17, 1894. I attended the local schools through the tenth grade, then went on to a Military Academy in Lincoln, Nebraska, where I received my first introduction to football. Since Kearney State Normal School was only 20 miles from my home, I decided to further my education there. Altho my main interest at that time was football and athletics, I soon discovered my interest in the biological sciences and after four years at Kearney, determined to pursue a career in medicine. After spending a pre-med year at the University in Lincoln, I was accepted at the College of Medicine in Omaha, and was privileged to become a member of Phi Rho Sigma Fraternity. After graduation I obtained a valuable year's rotating internship at University Hospital in Omaha, which I completed in August, 1921.

Being ambitious, needing money, and engaged to Bonnie (whom I married in 1922) I decided to go into general practice in a small community. That month I arrived in Sutherland, Nebraska (a community of about 500) in my ancient Model T Ford, rented a vacant room in an old brick building off the main street (at $30 per month), partitioned three small rooms for a degree of privacy, and began practicing medicine at once. I recall that my office had a coal stove, and no air conditioning, except in the winter.

Upon my arrival in Sutherland, my practice began almost at once. I was unloading my scanty equipment at my new office about 8:00 p.m. when a very much disturbed young man appeared, requesting me to hurry out to his family's farm nearby, to care for his brother. He explained that his brother had a tonsillectomy performed in Omaha several days prior to this evening, but had suddenly starting hemorrhaging. The aging local physician had been unable to stop the bleeding. Needless to say, I welcomed the opportunity to "do my stuff" and was thankful that I was able to stop the hemorrhage. This dramatic incident of course gave me a good early start in the community, for which I was grateful.

It was fortunate for me, too, that the town of Sutherland had a capable pharmacist and drugstore owner. He was a most helpful friend, and also introduced me to my first local rodeo, which was held at the Harschfeld Ranch up on the Birdwood Creek, north of Sutherland in the Sand Hills. This trip was really an education to me, as I had never seen so much country with so little population before. Later, I found that there was a certain distinct fascination about the Sand Hills country, aside from its being one of the finest cattle grazing areas in the United States.

In the winter of 1924, we had very severe snowstorms in our area which handicapped me in carrying out house calls in the surrounding country. I recall that one time, when I was unable to drive my car on the snow-blocked road ten miles into the country, the family of a very ill teenage boy offered to bring a saddle horse into town if I would make the call on horseback. I strapped my bag to the saddle horn and made it through the snowdrifts, to find that the boy was seriously ill with true lobar pneumonia. I'm glad to say that the boy got well, but I must admit that his doctor was somewhat disabled for the following few days, not being used to this kind of conveyance.

As interns at the University Hospital in Omaha, we received a very good surgical training, and the only difficulty I encountered was finding some place to carry on emergency procedures when necessity arose. I vividly recall improvising a dining room table for an operating table, using a wash boiler as sterilizer for instruments and laporotomy pack, on one occasion for ectopic pregnancy and another for rib resection following pnuemonia. Finally, this situation necessitated the development of a small private hospital in Sutherland. I recall a number of smalltown doctors throughout Nebraska did the same thing about this time.

In 1928, I decided to move to North Platte, Nebraska, and accordingly disposed of my practice in Sutherland. However the hospital situation here was not entirely satisfactory until 1934, when the community built a fine modern 75-bed hospital and arranged for the Sisters of St. Francis from Sylvania, Ohio to run it.

The 1930's were very lean and difficult years because of both drouth and depression, but rich in experience. I still recall that one of my farmer-rancher patients said to me (when corn was worth only 10 cents a bushel in 1932) — "Come on out to our place, Doc, and see one of the fattest and nakedest families you'll ever see in your lifetime." This surely accurately depicted the state of conditions during those lean years.

Although, in those early years particularly, I was on duty 24 hours a day, seven days a week, with no vacations possible, I must say that I did not regard these experiences as hardships. I, and my fellow-practitioners in small town general practice, considered them as typical episodes to be expected, which challenged one's knowledge, self-reliance and physical stamina.

Charles F. Heider, Sr., M.D.
North Platte, Nebraska

To the Editor:

Mrs. Stonecypher and I wish to thank the NSMA — its officership and members — for the very enjoyable luncheon and the recognition of fifty years of medical practice extended to me — more properly I should write "extended to us." The experience was very gratifying and greatly appreciated.

The outstanding thought that a person has in looking back over the fifty years in medicine, is the multiplicity of the changes that have occurred in every aspect of medical work, and the fact of the much greater effectiveness —the better results — of the work. Newer and greatly better methods of diagnosis, therapy understanding, and disciplines in great number, as we all agree.

But the equally significant (and these are regrettable) changes that have occurred, are the differences of attitude of the patient toward the doctor, brought about by (largely) the pressure of politics and politicians, plaintiff's attorneys, and certain social worker idealists. The image of the doctor as a kindly, interested friend has (except in the smaller communities and rural areas) faded away and has been superseded by that of a sort of tissue-tinker prone to, or at least capable of, carelessness, indifference, and hauteur.

So-called "organized" medicine — county, state, and national — has done a very commendable job in holding back this destructive juggernaut and keeping it from completely wrecking the doctor-patient tie. It seems strange that politicians can bring themselves to believe that they know more how medicine should be practiced than we MDs do.

Perhaps some part of it is due to the deterioration of the doctor's attempt at P.R. — the quality that we old-timers used to know as the "art" of medicine, as distinctive from the science. For latterly, and especially in the larger, metropolitan areas and "super clinics," public relations is afforded scant attention and it is also, occasionally, in the smaller communities.

And this I regret; perhaps it is no longer needed, but I think it is.

Respectfully,
D. D. Stonecypher (Sr.), M.D.
Nebraska City, Nebraska

WashingtoNotes

Drugs

The Congress has been asked by the Administration to authorize an additional expenditure of $155 million for the control of drug addiction.

The Administration's program would:

—Make Veteran's Administration facilities available to all former servicemen in need of drug rehabilitation regardless of the nature of their discharge and provide $14 million for this program.

—Seek $105 million from Congress to be used solely for treatment and rehabilitation of drug addicts.

—Request an additional $10 million to improve education programs on dangerous drugs.

—Request special legislation permitting the government to use information obtained by foreign police and other technical measures to make it easier to prosecute drug pushers.

—Asks for an additional $25.6 million for the Treasury Department to expand efforts against smugglers.

—Request $2 million to expedite research and development of detection equipment and techniques.

—Request $2 million for the Agriculture Department to develop herbicides that would destroy narcotics-producing plants.

—Request $1 million for assistance to other nations in training law enforcement officers.

Implicit in the Presidential drug control proposal is the endorsement of the use of methadone in the treatment of Vietnam veterans addicted to heroin. This high level sanction of the heretofore somewhat controversial and experimental use of methadone marks a turning point in the nation's attempt to rehabilitate addicts. Observers believe the decision to make wide-scale use of methadone was influenced by official recognition of the discouraging low "cure" rate from other approaches to the problem.

Shortly after the announcement of the new drug control program, President Nixon asked the American Medical Association's House of Delegates meeting in Atlantic City to join in the nationwide war on drug abuse.

Health care

In addition to his call to physicians to assist in the drug control program, the President in his Atlantic City address also challenged organized medicine to provide the leadership "this country craves for" in all areas of health care.

In immediate response to the President's challenge to American Medicine, the AMA's special communications program answered the Chief Executive's call for physician leadership in a full page message that appeared in many of the nation's principal newspapers. The message, titled "We accept, Mr. President," responded point-by-point to Mr. Nixon's request for broad physician support in all aspects of the nation's health.

Amphetamines

In a recent letter to the Bureau of Narcotics and Dangerous Drugs the AMA has stated that it will do everything possible to assist in implementing a proposed regulation that will curb the abuse of amphetamines and methamphetamines.

The AMA letter followed quickly after the House of Delegates meeting in Atlantic City in late June adopted the following resolution:

Resolved, That the American Medical Association urge all physicians to limit their use of amphetamines and other stimulant drugs to specific, well-recognized medical indications, and be it further

Resolved, That the American Medical Association support the proposal of the Bureau of Narcotics and Dangerous Drugs to transfer Amphetamine and Methamphetamine and their Salts, Optical Isomers, and Salts of their Optical Isomers from Schedule III to Schedule II published in the May 26, 1971 **Federal Register.**

Down Memory Lane

1. No better augury for the settlement of differences between labor and capital can be found than the interest manifested by the employer in recent years in the physical welfare of his employee.

2. In many quarters, particularly among keen business men, there is a mild contempt for medicine as a profession.

3. The Journal is authorized by the printer to say that the prices of reprints have been materially reduced.

4. Members of the association should take plans to make it plain to the people of their respective communities that the Allied Medical Association of America is not the American Medical Association, but a disgruntled heterogeniety of nondescripts, and that the propaganda against prohibition fostered by the former organization is not the propaganda of the American Medical Association nor of the medical profession.

5. It is not generally known that the Nebraska State Medical Association adopted medicolegal defense for its membership as one of the first four in the United States.

6. We feel that the use of the duodenal tube at operation is an aid in preventing postoperative vomiting of bile which is so often seen in cholecystectomies.

7. If we assume all traumatic hernia are compensable, there remains a group about which the greatest controversy centers, so called "effort hernia."

8. The number of graduates who are pursuing a two or three-year internship is constantly increasing.

9. The chief thing that is ruining the number of family physicians is nothing more than the financial part of it. A surgeon gets larger fees.

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Our Medical Schools

Creighton grants

Creighton University's Schools of Medicine and Dentistry have received over $1 million in special projects grants from the Department of Health, Education and Welfare.

The Medical School received $637,680 and the Dental School was awarded $516,309 for a total of $1,153,989 in federal money. The funds are a continuation of previously approved special projects grants.

According to Dr. Joseph Holthaus, Dean of the School of Medicine, the grant will be used to augment salaries for medical faculty and supporting staff. Dr. Raymond Shaddy, Dean of the School of Dentistry, said, "The Dental School's portion will be used to support the overall dental education program, including faculty and staff salaries, equipment replacement and library needs."

Creighton is one of 116 medical, dental and health professions schools receiving awards totaling $45,940,291 in HEW funds.

Creighton: dentistry

A new department in the Creighton University School of Dentistry is designed to integrate the technical skills of dentistry with community programs and social service. The Department of Community Dentistry will be chaired by Dr. L. Charles Meyer, it was announced by Creighton President Rev. Joseph J. Labaj, S.J.

The department has been in the planning and development stages for the past two years, giving dental assistance in the Omaha and Plattsmouth, Neb., Head Start Programs, the Upward Bound Program and neighborhood day care centers. Creighton dental personnel have provided dental care for the chronically ill and handicapped in private homes and have conducted oral cancer detection in private nursing homes and homes for the aged.

Under the new department, these projects will become externships for junior and senior dental students earning elective credit hours. Students will also serve externships at Glenwood State Hospital, Glenwood, Ia., and in private dental offices in the area.

Courses previously taught in other departments have been coordinated into the Department of Community Dentistry. They are history of dentistry, practice administration, jurisprudence, public health dentistry and social issues. These courses will be part of a newly structured curriculum including introduction to preventive dentistry, introduction to research, communication and the externship programs.

Special program at U of N

Thirty-one students have begun a special program at the University of Nebraska College of Medicine. They are in the College's second "physician augmentation" class.

These students will take an accelerated program which they are expected to complete in three years, rather than in the traditional four years. One means of shortening the period of medical training is by eliminating summer vacations, according to Dr. Mary Jo Henn, assistant dean for student affairs.

The concentrated medical education program is designed to alleviate the shortage of physicians in the state of Nebraska. A similar group of 20 students began the first such accelerated program a year ago.

In addition to the 31 new freshmen, 100 more are expected to begin the traditional four year program in September.

Coming Meetings

CRIPPLED CHILDREN'S CLINIC —
August 7 — Ord, Elks Club
August 14 — Scottsbluff, St. Mary's Hospital
August 28 — Cozad, Elks Club

AMA COUNCIL ON OCCUPATIONAL HEALTH — 31st Annual Congress at Jackson Lake Lodge in Grand Teton Park, Wyoming, August 29-30, 1971.

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

AMERICAN ACADEMY OF OPHTHALMOLOGY & OTOLARYNGOLOGY — Annual Meeting at the Convention Center in Las Vegas, Nevada, September 20-24, 1971. For details, write to: C. M. Kos, M.D., 15 Second St. SW, Rochester, Minn. 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

PEDIATRIC CARDIORESPIRATORY CARE — Houston, Texas, Sept. 30-Oct. 2, 1971; developed by American College of Chest Physicians and the Cystic Fibrosis Foundation. Write to: Department of Continuing Education, American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois 60611.

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY — Postgraduate Course, October 4 through 9, 1971 at the University of Illinois Hospital Eye and Ear Infirmary. Write to Department of Otolaryngology, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

OTOLARYNGOLOGY — Post graduate course; Sheraton Four Ambassadors Hotel, Miami, Florida, Oct. 8 and 9, 1971; presented by University of Miami School of Medicine. AAFB credit: 9 hours. Write to: F. W. Pullen, II, M.D., Neuro-Otologic Laboratory, School of Medicine, P.O. Box 875, Biscayne Annex, Miami, Florida 33152.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE — 22nd Annual Session; October 11-15, 1971; Americana Hotel, New York City. Address of AALAS is: 4 East Clinton St., P.O. Box 10, Joliet, Ill. 60434.

BRYAN DAYS — Oct. 15 and 16, 1971; Bryan Memorial Hospital, Lincoln, Nebraska. Write to: George E. Larson, M.D., Bryan Memorial Hospital.

BIOAVAILABILITY OF DRUGS CONFERENCE — Sponsored by the U.S. Pharmacpoeia and the Drug Research Board of the National Research Council, Oct. 18 and 19, 1971, in the new auditorium of the National Academy of Sciences, 2101 Constitution Ave. NW, Washington, D.C. Write to: U. S. Pharmacopeial Convention, 4630 Montgomery Ave., Bethesda, Md. 20014.

NEBRASKA STATE MEDICAL ASSOCIATION — Fall Meeting; House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY — October 23 through 29, 1971; in

U. of Illinois Eye and Ear Infirmary. Write to: Otolaryngology, P.O. Box 6998, Chicago, Illinois 60680.

ANTIBIOTICS AND INFECTION COURSE — Oct. 28, 29, 30, 1971. Write to: Ian Maclean Smith, M.D., University of Iowa Hospitals, Iowa City, Iowa 52240.

OMAHA MID-WEST CLINICAL SOCIETY —39th Annual Postgraduate Assembly; November 1, 2 and 3, 1971; Omaha Hilton Hotel. The Society's address is 1040 Medical Arts Bldg., Omaha 68102.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City. NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28 - December 1, 1971.

Welcome New Members

Robert N. Baker, M.D.
Department of Neurology
University of Nebraska
Omaha, Nebraska 68105

Carl L. Boschult, M.D.
8303 West Dodge
Omaha, Nebraska 68114

Alan H. Domina, M.D.
4740 "A" Street
Lincoln, Nebraska 68510

Bulent Lunakan, M.D.
Nebraska Psychological Institute
Omaha, Nebraska 68105

Medicinews

Powell to address physicians

J. Enoch Powell, chief of the British National Health Service from 1960 to 1963, will be in the United States on October 8, 1971, to address the annual meeting of the Association of American Physicians and Surgeons. The meeting will be in Clayton, Mo., a suburb of St. Louis.

The ex-Minister of Health in Great Britain is regarded as the world's leading authority on politically controlled medicine. After trying for three years to make the British national health plan work, he now admits it is an inherent failure. He will explain the nature of that failure during the 3-day AAPS meeting in October. In addition, he will examine the whole network of connections between medicine and politics.

Powell has remained close to British politics since leaving his position as Minister of Health, and currently is a member of Parliament, representing an industrial district centering on Wolverhampton, England. He is the author of several books, including *Medicine and Politics.*

AAPS is a voluntary association of private physicians organized to maintain and improve high-quality medical care in the United States. It represents doctors in 1,300 counties and all 50 states.

Heart association

Registration and hotel reservation forms for the American Heart Association's 44th annual Scientific Sessions may now be obtained through the Nebraska Heart Association or the AHA National Office, 44 E. 23rd St., New York, N.Y. 10010.

The meeting begins on Thursday morning, Nov. 11, and continues through Sunday noon, Nov. 14, in Convention Center, Anaheim, Calif. Programs on clinical cardiology and concurrent sessions on various phases of cardiovascular research and medicine will be featured.

The Association's Council on Arteriosclerosis holds its annual scientific meeting on Tuesday and Wednesday, Nov. 9-10, also in Convention Center, immediately preceding AHA's Scientific Sessions. All interested individuals are invited to attend the Council sessions.

Woman's Auxiliary

1. Round-up of the Convention

A health message from President Richard M. Nixon, a roster of prominent speakers, and a record-shattering fund raising effort for medical education highlighted the 48th annual convention of the Woman's Auxiliary to the American Medical Association held June 20-24, 1971, in Atlantic City, New Jersey.

The total registration of 871 included the following:

National officers	28
National chairmen	9
Past National presidents	7
National Regional chairmen	10
State Presidential Delegates	47
Delegates	262
Alternates	48
Members	300
Guests	160

Mrs. Leland Olson was the Presidential delegate from Nebraska. Other delegates from Nebraska were: Mrs. John Filkins, immediate past president; Mrs. Arthur L. Smith, Sr., and Mrs. J. Whitney Kelley.

The convention was called to order by the president, Mrs. R. C. L. Robertson at 9:00 a.m., Monday, June 21. Speaking to the House of Delegates, Mrs. Robertson said: "Better 'Service in the Seventies' can be performed by our membership by urging them to increase their efforts toward working for good health in their communities." She went on to say that numerous projects have already done much to help, but advocated the widespread use of programs on drug abuse and Children and Youth.

Giving the keynote address for the Monday session, Walter H. Johnson, Jr., Chairman of the Board of Myers Infoplan International, declared that society has been overspecialized in education, in the professions, in public affairs — and in so doing has complicated life and bred frustration.

Mr. Johnson said: "I am going to talk to you as women — not as physicians' wives — about the changing world as it affects all of us. Chaos in human affairs is not only natural, it is also good. None of us can walk away from problems, we must face them, and *you* can change the course of human events if you are willing to try."

Mr. Johnson stated that women can be the great generalists in this world of specialization. They hold the thread of community continuity. "They have time in which to change things, and they who have given birth to society have a responsibility to see that it is a good one," he declared.

"Be yourself, not the doctor's wife," said Mr. Johnson. "You don't need your husband to be you. You can keep the practice of medicine and the medical profession inviolate by applying your brains, energy and talents to communicating with people." "Communicate to citizens and the voters the knowledge that doctors *are* concerned with people — and with the social needs of our society," Mr. Johnson added.

The Monday morning session closed with the lovely and awe-inspiring Memorial Service which paid tribute to the memory of our deceased members.

Walter C. Bornemeier, M.D., President of the A.M.A., was the speaker for the Monday luncheon which honored A.M.A. officers, trustees, and their wives. Dr. Bornemeier congratulated the Auxiliary members for their "unselfish devotion and expenditure of time and money to make this country a better place in which to live." In citing auxiliary accomplishments in Health Careers and funds for medical education, he said: "the Auxiliary is sowing the seeds of inspiration, of leadership, and of example."

At this luncheon, Mrs. R. C. L. Robertson presented the record-breaking check for AMA-ERF to Dr. John Chenault, President of AMA-ERF and an AMA Trustee. This year's contribution totalled $550,927.01. Nebraska's share of the total amount was: $6,683.51, and although we did not receive an award this year we *were* the number One runner-up for the Award of Merit.

"Adult Responsibility in Action" was the title for the afternoon session. This was the presentation of the activities of each State Auxiliary for the year 1970-71. It was not difficult to detect that the area of health education most in the mind of every State spokesman was that of drug abuse. Mrs. John Filkins, as immediate past president of the Nebraska Auxiliary spoke on our activities on drug abuse, Community Health, Legislation, and Children and Youth.

Tuesday's meeting was adjourned early enabling the members of the delegation to be present for the speech given by President Richard M. Nixon to the A.M.A. House of Delegates.

President Nixon told his listeners that "the responsibility for the health of this nation is in your hands," and called America's doctors "the indispensable front-line soldiers in the effort to end and prevent drug abuse."

"America at this time needs leadership from those in the medical profession, *and* their wives, all across the country, not merely in the areas that affect you directly, but in the areas of national problems," he said.

The President made a strong appeal for retention of a voluntary health insurance program, but indicated the "financial considerations still deny quality care to many Americans."

"America's health care system needs reform. You have recognized that," he told the delegates, "but we can never improve our country's medical system by working against our country's medical profession." "No system of health care in this nation will ever work unless the doctors of this nation make it work," said President Nixon.

The Honorable Patricia Reilly Hitt, assistant secretary for community field services, Department of Health, Education and Welfare, addressed the Tuesday luncheon honoring State presidents and past National presidents.

Mrs. Hitt said that there is much that is good about American health enterprise, but reiterated the need for preventive medicine with emphasis on keeping people well.

Mrs. Hitt was generous in her praise of the Woman's Auxiliary — National, State, and Local — for their "seemingly endless accomplishments all over the country."

Mrs. G. Prentiss Lee of Portland, Oregon, was installed as president of the Woman's Auxiliary to the A.M.A. on Wednesday, June 23, 1971. In her inaugural address Mrs. Lee pointed out that the Auxiliary recognizes the importance of health education, and historically as an organization has always been concerned with health education.

Mrs. Lee called upon the Auxiliary members — 90,000 — strong, to take a positive posture by aggressively championing those features of national health proposals that "will best benefit mankind."

"This year we will be looking boldly into the future as the Woman's Auxiliary to the American Medical Association approaches its fiftieth anniversary convention in 1972," she said. "We are taking a firm step forward with sincere conviction that we can be leaders in health. "To be successful we must be action oriented, and the ACTION begins in the County Auxiliary, with the individual member and YOU!"

Mrs. Lee announced a national health education conference to be co-sponsored by the A.M.A. and its Woman's Auxiliary, for women's organizations interested in health. "The conference will be a 'first' for our organization, and will be designed to stimulate women into action," Mrs. Lee said.

Mrs. Lee encouraged Auxiliary members to maintain their interest and enthusiasm. She called on members to add luster to the medical profession by joining forces with the Auxiliary and giving of themselves.

Mrs. Robert F. Beckley of Lock Haven, Pennsylvania was elected president-elect, and Mrs. Willard C. Scrivener, East Saint Louis, Illinois, was elected first vice-president.

Our own State Auxiliary has been honored by having three members serving in a national position. Mrs. Arthur L. Smith, Sr., was a member of the nominating committee for the national organization. Mrs.

John Filkins has been appointed to serve as North Central Regional Chairman for the committee on Health Education for the year 1971-1972. Mrs. J. Whitney Kelley was elected and will serve as a Director for a two year period.

The meeting officially closed following a post-convention conference for state presidents and presidents-elect on Wednesday afternoon, June 23, 1971.

Remember — the Woman's Auxiliary to the American Medical Association will celebrate its 49th year anniversary in San Francisco, California, June 18-22, 1972, and YOU, by your presence, can help to make it a memorable convention. Be sure to attend!!

Irene H. Kelley

2. 46th annual business meeting

The 46th Annual Business Meeting of the Woman's Auxiliary to the Nebraska State Medical Association was called to order by the President, Mrs. John Filkins. Invocation was given by Mrs. Paul Scott, Chaplain, followed by the Pledge of Allegiance to the Flag and the Nebraska State Auxiliary Pledge.

Mrs. Filkins welcomed all members to the Annual meeting. The Past Presidents and Members-at-Large present stood and were introduced.

Mrs. Filkins welcomed our two guests, Mrs. William Blackstone of Longview, Washington, Director, Woman's Auxiliary to the American Medical Association, our luncheon speaker, and the new President-Elect of the Missouri Auxiliary, Mrs. Keith Jones of Warrensburg, Missouri.

Minutes of the 45th Annual Business meeting were printed in the June, 1970 issue of the Nebraska State Medical Journal and not read. Minutes approved as printed.

Resolutions and Revisions Committee report was read by Mrs. Chester Farrell, Chairman, and will be published in the Nebraska State Medical Journal.

Mrs. Leland Olson, President-Elect, read the combined annual report of the President and President-Elect. They expressed their thanks for allowing them to represent the Auxiliary this past year.

Mrs. James Carlson, First Vice-President, reported a membership of 852 and hoped to have 900 members this coming year.

In the absence of Mrs. Warren Bosley, Second Vice-President, Mrs. Carlson reported 76 members-at-large.

Mrs. Keith McCormick, Treasurer, reported a balance on hand as of April 24, $1,314.46. Report accepted as read and placed on file.

Books will be audited by the Auditing Committee after convention bills have been presented and before the beginning of the next fiscal year, July 1. Committee's report will be given at Fall Board Meeting.

Mrs. Frank Tanner, Budget and Finance Chairman, reported savings accounts as $1,044.84 and $889.29; balance on hand in checking account, $1,326.46, totaling $3,260.59. Motion was made to accept the report for file. Seconded and carried. Mrs. Tanner presented the proposed budget. Motion was made to accept the proposed budget. Seconded and carried.

Reports of Standing Committees: Mrs. Hiram Walker, Chairman of Health Careers; Mrs. Dean McGee, Chairman of Community Health Education; and Mrs. P. Bryant Olsson, Chairman of Legislation, summarized their reports.

Special Committees: Mrs. J. Whitney Kelley, Chairman of AMA-ERF, and Mrs. William Jensen, Chairman of Nebraska Medical Foundation, displayed charts showing contributions.

Mrs. Filkins announced that Omaha-Douglas County Auxiliary voted an Associate Membership for wives of Interns and Residents of Creighton and U.N. Medical Schools whose husbands are members of Omaha-Douglas County Medical Society.

Environmental Health: Mrs. Howard Dinsdale, Chairman, reported this was mostly an information year since it is a new program.

Reports were given by each county President. Mrs. George Robertson moved to accept the reports for file.

Mrs. P. Bryant Olsson, Legislation Chairman, presented Dozen Day pins to the following Auxiliary members: Adams County, Mrs. Clyde Kleager and Mrs. Fred Rutt; Buffalo County, Mrs. Hiram Walker; Douglas County, Mrs. Keith McCormick, Mrs. Leland Olson, Mrs. Vernon Ward, Mrs. George Robertson; Gage County, Mrs. Wayne Waddell, Mrs. C. Frericks, Mrs. Clarence Brott, Mrs. Dwight Moell, Mrs. R. Brown, Mrs. Elmer Penner, Mrs. John Porter, and Mrs. S. M. Rathbun; Lancaster County, Mrs. Howard Dinsdale and Mrs. Robert Jones; Madison Six County, Mrs. James Carlson; Members-at-Large, Mrs. Paul Scott of Auburn; Dawson County, Mrs. P. Bryant Olsson. Thirty Dozen Day pins have now been awarded.

Mrs. Paul Scott, Chaplain, assisted by Mrs. Fay Smith, conducted a memorial service in memory of Mrs. Alexander Courshen of Chadron, Mrs. Nathan Simon of Lincoln, and Mrs. M. B. Francis of Bellevue.

Announcements: American Medical Association Convention will be held in Atlantic City, New Jersey, June 20-24, 1971. North Central Regional Workshop, October 14-15, Minneapolis, Minn., Radisson Hotel, for Presidents, Presidents-Elect, Chairmen of AMA-ERF, Legislation, Membership and Publications. Sherry Tea to follow Annual Business meeting.

Mrs. Robert McIntire, Chairman of the Nominating Committee, submitted the report of the Committee: For President, Mrs. Leland Olson of Omaha; President-Elect, Mrs. James Carlson of Verdigre; First Vice-President, Mrs. Warren Bosley of Grand Island; Second Vice-President, Mrs. Kenneth McGinnis of Lincoln; Treasurer, Mrs. Keith McCormick of Omaha; Directors for two year term, Mrs. S. F. Moessner of Lincoln and Mrs. Vernon Ward of Omaha; Reaffirm Directors for one year term, Mrs. Gordon Francis of Grand Island and Mrs. Charles Landgraf of Hastings.

There were no nominations from the floor. Candidates stood and were introduced. Mrs. Howard Dinsdale moved the nominees be approved. Seconded and carried.

Mrs. Olson appointed Mrs. Stanley Bach, Recording Secretary; Mrs. Barney Rees, Corresponding Secretary, and Mrs. George Robertson, Historian and Parliamentarian. Installation ceremony will be conducted at the Annual State Medical Wives' Luncheon Tuesday, April 27, Hilton Hotel.

Mrs. Willis Wright and Mrs. James Donelan, in charge of registration, were introduced.

With no further business, meeting adjourned.

Respectfully submitted,
Mrs. Stanley Bach,
Recording Secretary.

The Letter Box

Dear Dr Cole:

In reply to your editorial regarding the Admission Policy of the University of Nebraska may we express some additional comments. The concepts of students participating in the decision making processes at the university is only of recent origin. To some this concept may seem permissive; to others, something long overdue. In any event it is common practice in many schools throughout the country. Furthermore, at a national level, the Association of American Medical Colleges on May 20, 1971 formally approved increased student participation by approving rules and regulations for the new Organization of Student Representatives as an active segment of the A.A.M.C. This organization will be made up of one representative from each institution who will take part in the activities of the A.A.M.C.

The important issue, however, is whether the students serve any useful purpose on the committee. From the experience at this Medical Center the answer is an unqualified yes. The students bring a fresh viewpoint to the committee, and do not act for their "buddy" or friend. They appreciate the work that goes into the admission of students and consider their role as important and responsible.

It is our hope that students serving on committees will understand the problems of the faculty and will build a strong relationship with their teachers. This can only lead to a better university and a more mature graduate physician.

Sincerely,
Mary Jo Henn, M.D.
Assistant Dean, Student Affairs
Michael J. Carver, Ph.D.
Assistant Dean, Student Affairs

The Law

Cancer cure hearings

Elliot L. Richardson, Secretary of HEW, appeared before the Senate Labor and Public Welfare Subcommittee on Health to testify in favor of the Administration's cancer cure program, S. 1828, introduced by Sen. Dominick (R), Colorado. The Secretary stated that the bill, establishing a new cancer cure program within the National Institutes of Health, expresses the national commitment to an intensive campaign to find a cure for cancer. He emphasized that the location of the program within NIH was essential, since it would permit coordination with the other programs and activities of the NIH. The Administration's position is in opposition to the approach proposed in S. 34, introduced by Sen. Kennedy (D), Mass., which would create an independent cancer authority. The Secretary went on to oppose an amendment to S. 34, offered by Sen. Nelson (D), Wis., under which a national cancer authority would be created within NIH, but NIH would be removed from the Department of HEW. Secretary Richardson stated that the Administration could not support a plan which would separate NIH from the Health Services and Mental Health Administration and HEW.

H.R. 1 passed by house

After considerable debate, the House on June 22, 1971, passed H.R. 1, the Social Security Amendments of 1971, by a vote of 280 to 132. Included in the bill are provisions increasing Social Security cash benefits, amending the Medicare, Medicaid, and Maternal and Child Health programs, and establishing the Administration's Family Assistance Plan.

Hearings on administration drug abuse bill

Representative Staggers (D), W.Va., and Springer (R), Ill., have cosponsored H.R. 9264, the Special Action Office for Drug Abuse Prevention Act, the Administration's bill to create a special office within the Executive Branch to coordinate the nation's drug abuse control activities. The Director, who would report directly to the President, would have broad powers to direct and control, including the authority to provide funding for, the activities in various agencies having programs relating to drug abuse. The bill has the stated purpose of placing under the direction of the new Special Action Office, all federal drug abuse prevention, treatment, rehabilitation, training, education, and research activities; and major drug abuse programs will be centrally developed, funded, managed, and evaluated to achieve maximum effectiveness. H.R. 9264 is the first of several Administration proposals implementing the President's new offensive against drug abuse.

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Physicians' Classified

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Manuscripts to be presented for publication in the JOURNAL should be typewritten, double-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized ($8\frac{1}{2}$ by 11 in.) white paper. Wide margins (at least $1\frac{1}{4}$ in. on left) should be left free of typing. On the first or title-page should be shown the title of the article, the name (or names) of the author, his degree and other significant credits. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the Journal's address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.

Medicinews . . .

Medical assistants

A second step has been taken toward assuring quality education for medical assistants. Standards have now been revised to allow greater curriculum flexibility. Principal changes include the development of a basic one-year curriculum and allowance for medical specialty courses within the existing two-year program.

In addition, the curriculum may be established in vocational-technical schools, proprietary educational institutions, and military-based schools as well as junior, community and senior colleges. Adequate clinical facilities are one of the requirements for approval.

The revised standards or "essentials" supplement the original two-year medical assisting curriculum developed jointly by the American Medical Association (AMA) and the American Association of Medical Assistants (AAMA) two years ago.

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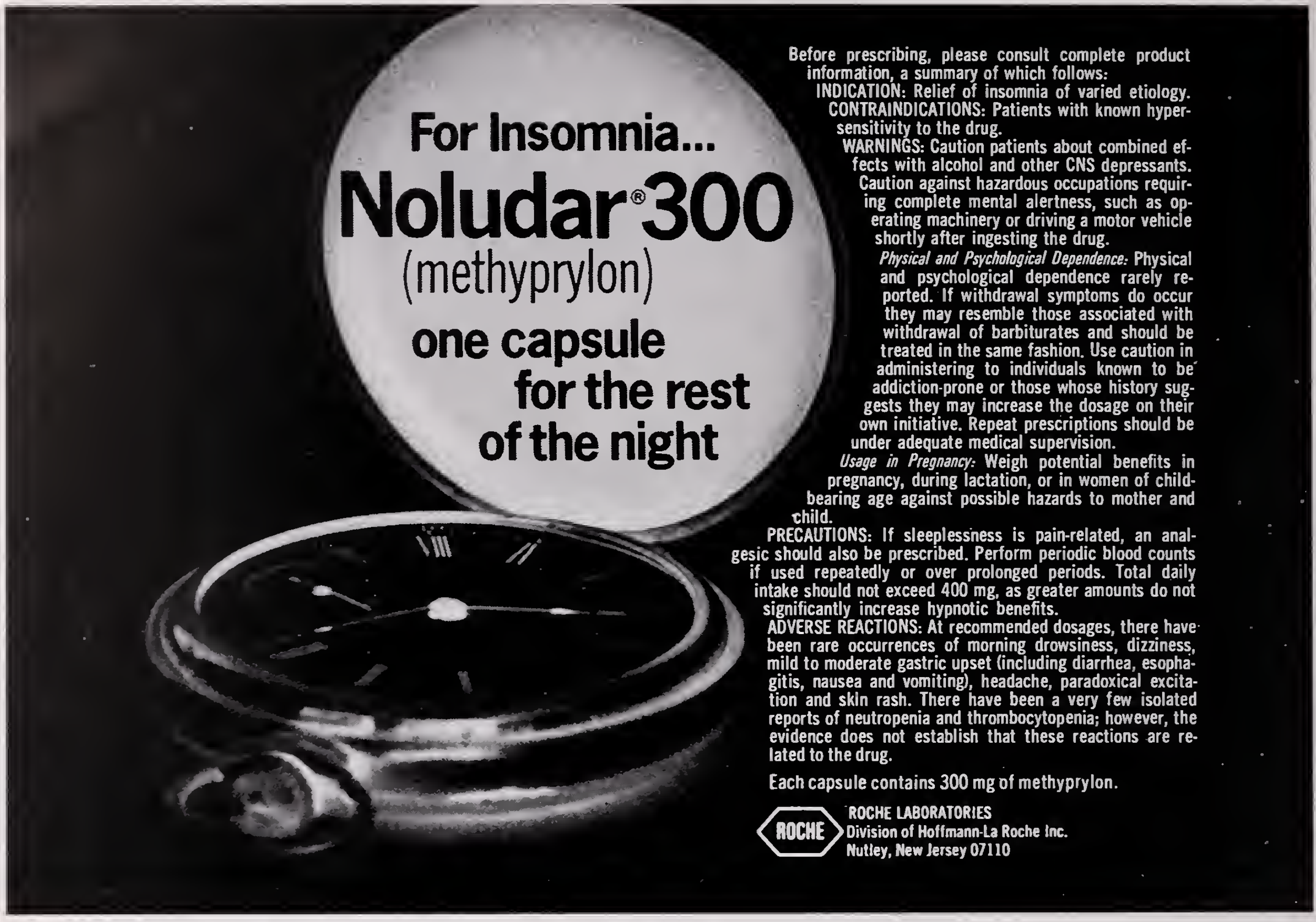

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Medicinews . . .

The AMA's legislative record

The American Medical Association set forth its recent record on legislation — a record that shows statements in support of health care proposals in 31 of 35 appearances in the 91st Congress and support in the present Congress for medical school expansion, increased financial aid to medical students, family practice training programs and full funding for maternal and child care programs.

The AMA's record on legislation was submitted as part of a 39 page statement filed by the organization with the Subcommittee on Administrative Practice and Procedure of the Senate Judiciary Committee. Subcommittee Chairman Sen. Edward M. Kennedy had charged the AMA with maintaining a negative and obstructionist attitude toward proposals to improve health care in the United States during a hearing by the Subcommittee on July 14.

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The Law . . .

Servicemen's drug abuse bill reported

The House Veterans' Affairs Committee has reported H.R. 9265, the Servicemen's, Veterans' and Ex-Servicemen's Drug Treatment and Rehabilitation Act of 1971. The bill would create, within the Veterans' Administration, a treatment and rehabilitation program for servicemen, veterans and ex-servicemen suffering from drug abuse or dependency. Under the bill, veterans and ex-servicemen could be committed to the custody of the VA Administrator. Treatment of these individuals would be primarily provided at the National Institute of Mental Health facilities in Fort Worth, Texas, and Lexington, Kentucky.

Senate passes conquest of cancer act

By a vote of 79 to 1, the Senate passed S. 1828, the Conquest of Cancer Act. The bill would establish an independent Conquest of Cancer agency within the National Institutes of Health. Sen. Nelson (D) Wis., cast the lone opposing vote on the basis that an independent agency would hamper the effort to coordinate all related cancer research and such an approach could lead to the eventual dismantling of NIH. The bill will now be sent to the House.

Methotrexate-Induced Carcinoma? — S. R. Craig and E. W. Rosenberg (858 Madison Ave., Memphis 38103). Arch Derm 103: 505-506 (May) 1971.

A carcinoma of the nasopharynx developed in a 45-year-old man who had taken methotrexate for four years for treatment of psoriasis. These tumors have been associated with antibody titers to Epstein-Barr virus and this patient had a 1:640 titer of antibody to the virus. The question is whether the known immunosuppressive effect of methotrexate lowered this patient's resistance to a possibly carcinogenic virus.

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NEBRASKA STATE MEDICAL ASSOCIATION
Council Districts and Component County Medical Societies

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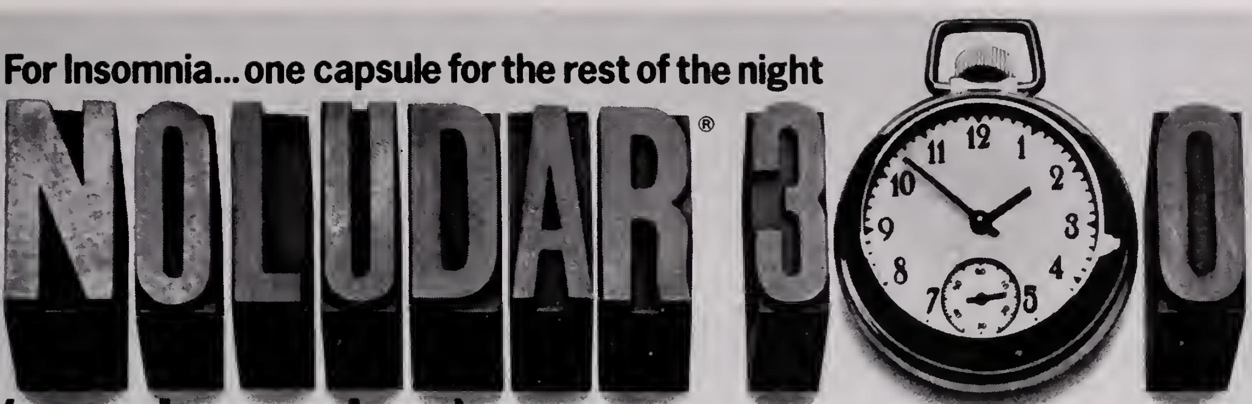

(methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
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Each capsule contains 300 mg of methyprylon.

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The Law . . .

VA assistance to medical schools reported

The House Veteran's Affairs Committee reported H.J. Res. 748, the Veterans' Administration Medical School Assistance and Health Service Personnel and Training Act of 1971. The resolution authorizes the Administrator of Veterans' Affairs to provide assistance in the establishment of new state medical schools and to aid in the improvement of existing medical schools which are affiliated with the Veterans' Administration. He would also be authorized to develop cooperative arrangements between insitutions of higher education, hospitals, and other public or nonprofit health service insitutions and the VA to develop and conduct educational and training programs for health care personnel.

A total of $237 million would be authorized to carry out these three programs during the fiscal years 1972 through 1978.

"Okay, Doctor, they go into intensive care till your next round."

Hypersensitivity to penicillin is a good reason to consider Lincocin®

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Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With ß-hemolytic streptococcal infections, treatment should continue for at least 10 days.

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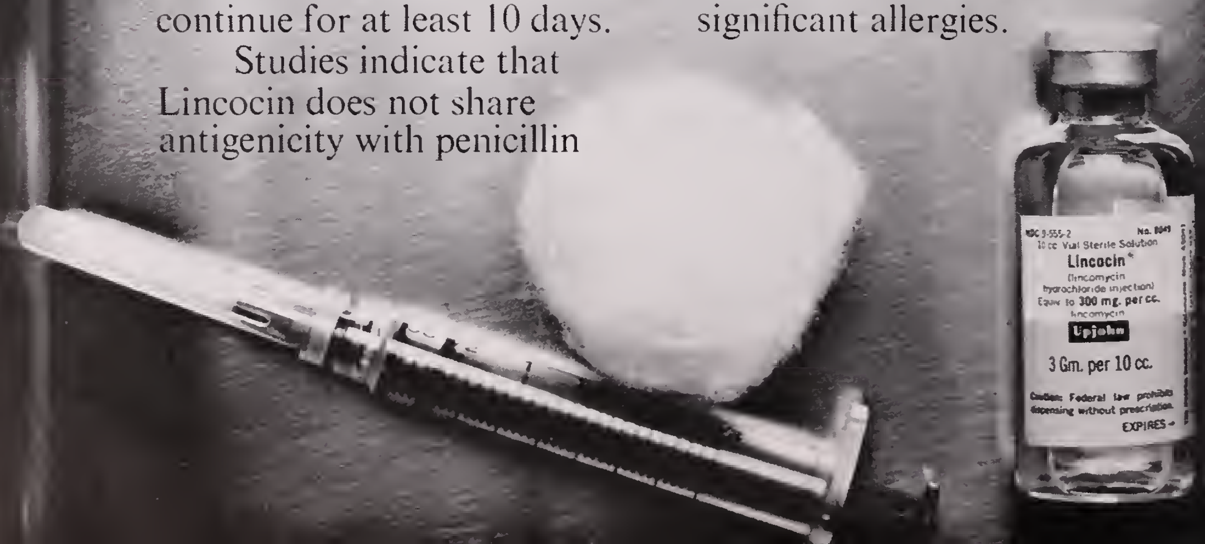
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THE NEBRASKA STATE MEDICAL JOURNAL

A STATISTICAL ANALYSIS OF THE FORTUNE COOKIE

We learn by experience, and if it does not come along, we create it. Where people once waited for a divine wind, before throwing wheat into the air, to separate the good from the bad, they soon learned to use a fan. So we now produce experiments and see what happens. And to eliminate bias, that is, all factors over which we have any control, we choose cases at random. We may speak learnedly of the chi-square test or of the t-test or of the double-blind test, but all we can do is alternate cases and leave everything to chance, or throw it into the lap of the gods, as our predecessors would say.

But we accomplish little when we leave things to chance, for we eliminate human error and that is all. How good a problem solver is chance, and how knowing, how honest, how reliable, and how accurate? For chance does not ensure results that are meaningful and does not promise to reveal truth. It mocks us, for like returning to play the crooked wheel that is the only wheel in town, it is all we can do.

Grown people at the finishing of a pleasant Chinese dinner will open their fortune cookies and perhaps a little childishly read the slips inside. We all know how they got there, but who does not read them? For they were put there haphazardously, and we choose them at random, and we may assume that chance has determined the results, and that fortune cookies are as reliable as other statistical methods.

Tonight, mine said I was trustworthy and artistic, so I know they're right.

—F.C.

FORGETTING

How we remember is something of a mystery, the while we talk of memory banks and of computer-like nerves. I am copying a list of numbers, and I say ten of them to myself, but I cannot remember so many. Six are too much, and so are five; four are my capacity. I write down four and go to the next group of four, which I remember easily. But the first of the second four would have been the fifth I could not remember before, and now I can, and now I have forgotten the first four, and it was only seconds ago that I knew them. Does forgetting go on at the same time-rate as learning?

Perhaps all knowledge is useful, and it is just as likely that some things are not worth knowing. As I crowd a useless fact into my brain, do I displace an important one? I am trying to learn the Pathetique Sonata, and I play one of its devilish runs over and over until I remember it, so I do not pause in the middle of its hundred-twenty-eight notes to see what comes next; there is no time. How primitive this technique is, and it is all we have. It is not cerebral, it is mechanical and is made up of neither thought-processes nor intelligence. Can we practice forgetting in the same way?

I meet a classmate, and he remembers something I once said, but I have forgotten it. Or I am woolgathering, and I suddenly remember something that happened years ago, a thing of no importance; why?

Of all the senses that accomplish this sort of thing, smell is the most efficient. You are assailed by a long-forgotten perfume or by the savor of a kind of mother's cooking, and you are instantly swept into the past.

In an accident, absence of body is as good as presence of mind, and so often in life, a good forgettery is more to be desired than a good memory.

—F.C.

ON HAVING YOUR PICTURE TAKEN

One picture is worth a thousand words, someone may have said, or as articles read now, $p=10^3w$. But pix are posed, and the photograph of an author is not one that simply shows you what he looks like, but one that tells you what he hopes he looks like.

So he thoughtfully holds his glasses in his hand or looks into a microscope or smiles absurdly or clasps a pipe or scowls, or he shows his profile or gazes into space or leans on a hand, and sometimes he cocks his head at a jaunty angle or stares at a typewriter.

I should like to see a photo of an author with his eyes closed, or walking away, or asleep, or standing on his head, or crying.

And one of a medical meeting where two people (identified as left and right, so you wonder if it's the picture's left or the person's) are *not* clutching a plaque or a check and you can't tell who is giving and who is receiving.

I don't think $p=10^3w$. I think five good words are worth a hundred pictures, like $w=20p$.

—F.C.

WE DIE IN CHANGING TIMES

I know we live in changing times, but dying is another thing. We may have called appendicitis typhilitis long ago and we once thought myocardial infarction was acute indigestion, but most modern diseases have always been with us. In fact, as we cure and even eliminate disease, and polio comes to mind (formerly known as infantile paralysis), we may have known more diseases in the 19th century than in the twentieth.

Of course, civilization has created illnesses of its own, and there are radiation sickness, highway deaths, transfusion reactions, postoperative complications, and airplane disasters, but the mortality rate is still one death per person.

And even self-destruction has kept pace with the times. Some 50 years ago, the two most popular methods of attempting suicide were swallowing iodine and bichloride of mercury. People once plugged keyholes and turned on the gas, and even put their heads in the oven, but the gas company didn't like that. I have not heard of these things today; they have stopped falling on their swords, too.

For now we have barbiturates and carbon monoxide and guns. Of course, some hang themselves and some jump from heights (even the heights are higher now), but others have put plastic bags over their heads, and that's new, and some have gone on one-way trips.

Dying is different now.

—F.C.

BETWEEN CASES

CURIO

Ultimum moriens means the last to die, and it is an old name for the right atrium, said to be the last part of the body to cease moving in death.

THE DIAGNOSIS

"Collegen's disease."

THE CONSULTATION

"Walks well with a wheelchair."

OLD WIVES TALE

Doctors save the best babies for themselves.

THE HISTORY

"In July of 1948, I don't know what time of year."

THE PHYSICAL

"He has a fracture of an old hip."

FOUND IN A BOOK

"It is a pragmatic and eclectic discipline."

THE SURGEON

"I can't exspleen it."

DISEASE OF THE MONTH

The Ouch-Ouch disease.

Patients cry itai-itai, because of pain.
Keio J Med (Dec) 1969:181-194, 195-211.

THE NEW MATH

"There is a scar over the middle two thirds of the clavicle."

—F.C.

Effects of Tumor Viruses on Cellular Growth and Transformation

THOMAS R. SMITH, M.D.
and
HORACE H. ZINNEMAN, M.D.*

THE role that viruses may play in affecting cellular growth of animal cells and their transformation into malignant cells has commanded great interest in the past decade. Tumor viruses in contrast to most viral infections do not stop but rather increase cellular replication and DNA synthesis.

Historically the study of malignant transformation dates back to 1911, when Rous found that a cancer in chicken muscle could be transmitted to a healthy chicken by means of a cell-free filtrate (Rous sarcoma virus) derived from the cancerous tissue. Actually, the transmission of an animal cancer had been achieved in 1908 by Ellerman and Bang using cell-free extracts to produce chicken leukemia, but leukemia was not recognized as a form of cancer at that time.[3, 26, 27]

In 1936, Bittner found that mouse mammary carcinoma occurred in 100 per cent of strain C_3H mice, but when they were crossed with C_{57} mice a mere 5 per cent incidence of mammary carcinoma resulted. Bittner demonstrated that the virus was transmitted in the milk.[26]

The progress of viral studies related to carcinogenesis has been most impressive in the past decade. Studies of tumor viruses are indicating the possible relevance of these laboratory studies to human disease. Attempts to isolate viruses from human tumors have met with little success thus far, but the study is pursued for two reasons: human cancers are epidemiologically, clinically, and pathologically similar to those in animals, and the viruses causing cancers in animals are biophysically, biochemically and in certain cases even antigenically the same as common human viruses.[3]

Let us enumerate some of the primary characteristics of the transformation process which occurs when viral infection of a cell leads to tumor cell formation.

1. An increased growth rate of cells and shorter doubling time occurs *in vitro*.[17]
2. A lack of contact inhibition of cells or anchorage dependency in culture resulting in production of multilayered clones of cells: Normally cells in tissue culture grow as a single layer of rows of cells. The normal cells grow until they touch one another and then growth is inhibited. Tumor production by a virus leads to small mounds of cells on the Petri dish and the cells assume a shape divergent from the nontransformed cell.[5, 8, 17, 29, 32]
3. Random chromosomal abnormalities occur in transformed cells, but the extent of the changes appears to differ considerably with the infecting or transforming virus. Polyoma and adenoviruses produce minimal changes, whereas SV40-infected cells reveal extensive chromosomal breaks, dicentrics, translocations, deletions, and fragmentation.[4, 17]
4. Production of tumors occurs upon transplantation of the tumor viruses to an immunologically compatible host.[4, 17]
5. The appearance of new antigens is found soon after infection in the transformed cell.[5, 32] An embryonic antigen appears and "organ specific" antigens are lost.[32]
6. A change in nutrient requirements of transformed cells *in vitro*[9] and rapid acidification of the media due to in-

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*From the Infectious Disease Section, Medical Service, Minneapolis Veterans Hospital and University of Minnesota Medical School, Minneapolis 55417.

creased lactic acid production has been demonstrated.[5]

7. Transformation occurs in cells only during the "S" period when cellular DNA is in the process of duplication.[12] The "S" period has been determined by using tritiated thymidine label. It extends from the time 50 per cent of the mitotic figures are in metaphase until 100 per cent of the metaphase figures have the thymidine label and the number of labeled metaphase figures again returns to 50 per cent.[18]

The DNA viruses establish a permanent association with the cell they transform by integrating the DNA structure of the virus into the cellular DNA, resulting in a lysogenic state as is found in the bacteriophage. As occurs in the lysogenic bacteria, the cells are transformed but few viral particles are produced, and the viral DNA replicates with the cellular DNA as a set of cellular genes.[8] DNA tumor viruses lead to either virus production with death of the cell or cellular transformation of the cell and no virus production.

The infection of BHK 21 line of hamster cells by the small DNA-containing polyoma virus leads to transformation of a very high percentage of the cells, but only about 5 per cent of the cells remain in the "stable transformation" state. Most of the transformed cells revert to normal in 4-5 days due to "abortive or temporary transformation." They lose all evidence of viral antigen and are again susceptible to viral infection and transformation.[29]

The RNA viruses on the other hand do not exhibit any evidence of permanent relationship between viral RNA and cellular components. Some authors feel the viral RNA keeps multiplying independently[8] and other authors believe that the RNA virus forms a DNA-provirus which controls functions of the host cell.[2, 12] In any case, the single stranded viral RNA forms a complementary strand of DNA to bring about nucleic acid synthesis.[10] The RNA virus can do one of three things upon infecting a cell: (1) infect the cell without transformation, but produce a virus by a "budding off" process from the cell membranes; (2) transform the cell without virus production; (3) cell transformation and virus production by a "budding off" process. The first two events may lead to the third.

DNA Viruses

The cellular events are much better understood in the DNA tumor virus group. The polyoma and SV40 viruses are small with a DNA of a molecular weight of approximately three million and genetic material estimated sufficient for 6-10 genes. The DNA of these viruses is not only small but also circular and much more easily isolated and purified.[8]

The cellular events of the viruses are dependent on the host cells. There are two types: (1) permissive cells in which the virus multiplies and causes cell death by lytic infection, and (2) nonpermissive cells which transform without viral multiplication.[8] The reason why some cells are permissive to infection and others are not is not well understood. Multiple factors may be involved, including host immunity, hormonal factors, tissue trophism, antigenic differences of the cell and virus, previous infection by a virus of the same strain producing a transplantation rejection antigen, lack of a necessary '"helper virus," or lack of complementary base sequences of the nucleic acids of the cell and viral DNA's.

The primary change in the transformed cell is the production of a surface or transplantation antigen which has been labeled "Transplantation Rejection Antigen"[5] or "Tumor - Specific Transplantation Antigen" (TSTA).[12] This antigen is demonstrated on the cell membrane by immunofluorescent techniques. It is felt to be responsible for the cell membrane changes leading to altered regulatory responses of the cell membrane and tumor transformation of the cell.[5]

The amount of viral DNA which is responsible for the transformation process is very small, approximately one third or less of the viral genome.[4, 9] The degree of association of the viral and cellular DNA is thought to differ from one virus and one cellular state to another and accounts for the alternatives of either production of infectious virus particles (lysis) or transformation. The polyoma virus ordinarily produces lysis of 95 to

99 per cent of the infected cells. However, if the cells are treated with x-irradiation or ultraviolet light exposure, lysis is less prominent and the transformation process increases tenfold. On the other hand, SV40 infection of mouse cell line 3T3 produces a very high rate of transformation of 50 per cent of the cells with minimal virus production and cellular lysis. Treatment which induces lysogenic bacteria (ultraviolet light, x-irradiation, H_2O_2 and mitomycin) substantially increases the lysis of SV40-3T3 transformed cells.[12] These two examples suggest that the viral-cellular association and interaction can be affected by the virus, the cell and the environment of the cell. Many other examples of environmental-host-virus interaction are known, but the temperature-sensitive polyoma virus is of special interest. This virus transforms cells at 31.5°C but not at 38.5°C, although once transformation occurs the cells remain transformed even if the temperature is raised to 38.5°C. This may suggest that some viruses transform cells and grow better in a subcutaneous site or in an extremity.[13] More recent experiments with some temperature-sensitive viruses have revealed that transformation may occur at 38.5°C but lysis may occur at lower temperatures.

RNA Viruses

The study of the process of cellular release of RNA viruses has revealed several very important concepts related to viral carcinogenesis. The avian leukosis viruses of the RNA leukemia viruses may produce lymphomatosis, myeloblastosis and erythroblastosis and are very widespread among normal as well as leukemic chickens. The disease process is transmitted either horizontally (from one chicken to another through saliva and feces leading to a viremia and antibody production) or vertically from the hen to the offspring by an infectious viremia with permanent shedding of virus but without production of antibodies.[19, 27, 30]

It was found that one strain of the several avian leukosis virus produces resistance to most strains of another RNA leukemia virus group (Rous sarcoma virus or RSV) but not all of the RSV strains, because their surface antigens resemble one another. This information led to the Resistance Inducing Factor Assay (RIF assay) in which RSV virus was used to infect chick embryos and assay for the presence of the avian leukosis virus which is present in the natural state of chick embryos. The presence of avian leukosis virus is demonstrated by watching for small foci of cells transformed by the RSV virus. By diluting the RSV stocks beyond the foci-forming end point in tissue culture, it was found that some RSV stocks of the Bryan Strain had an avian leukosis virus associated with them in higher concentration than the RSV itself. The two could not be separated. The reason for the persistent association of the two viruses was felt due to the fact that RSV was "defective" and was unable to produce its own lipopro-

Characteristics of major DNA tumor viruses

1	2	3	4	5	6	7			8	9	10	11
						(a)	(b)	(c)				
N	I	72	40-55	Papova viruses	Polyoma Simian virus-40 Shope papilloma Human wart K. virus	Mouse Rhesus Monkey Cottontail Rabbit Man	Papilloma	+	T, TSTA	+	Nucleus	Double stranded circular DNA
N	I	252	70-80	Adeno viruses	Human adenovirus types 3, 7, 12, 14, 18, 21 and 31	Man	?	?	T, TSTA and "soluble" antigen	+	Nucleus	Double stranded DNA
E	I	162	110 (200)	Herpes viruses	Luck's renal carcinoma Herpes Simplex Pseudorabies Cytomegalovirus Equine abortion Bovine rhinotracheitis	Frog Man			T, TSTA		Nucleus	Double stranded DNA
E	Brick --		230 x 300	Pox viruses	Yaba Monkey Pox Fibroma-Myxoma Molluscum Contagiosum Deer Fibroma	Monkey Rabbit Man Deer	Fibrosarcoma	+	Many	+	Cytoplasm	Double stranded DNA

tein coat or antigen which was produced by the associated avian leukosis virus. Knowledge of this fact led to the finding that the antigenicity of RSV is determined strictly by the strain of the helper virus used in the production of RSV from the "nonproducer" cells and is identical to that of the tumor virus. The avian leukosis virus was considered to be a "helper virus" and called Rous associated virus or RAV. RAV was found to have the same physical characteristics and antigenic composition as RSV which was difficult to explain until it was noted that some foci of transformed cells produced RSV and RAV, some produced only RAV and other foci produced no virus at all. If the nonproducing foci had RAV added there was rapid production of RAV and RSV viruses which had identical viral coat antigens. The RAV or helper virus was found to produce the viral coat for the RSV at the cell membrane. During RAV coat antigen production some change occurs in the cell wall so that any RSV virus of the same strain attempting to superinfect the transformed cell is interfered with and unable to penetrate the cell because of the antigenically related coat. This is believed to prevent or block superinfection by viruses of the same strain but does not prevent transformation of the cell to a productive phase when a virus of another group or strain infects the cells.[3, 19, 27, 30] Vogt found that very rarely some RSV transformed cells do produce RSV virus in small amounts and that RSV can produce its own coat. The RSV producing its own coat had a peculiar host range of only a few types of chick embryo cells. This work was later confirmed by Hanafusa, who also demonstrated that no other helper virus is present to produce the coat antigen. The original idea of RSV being "defective" is now known to be incorrect because RSV does not lack essential virus function. The role of the "helper" virus is really that of extending the limited host range of the RSV by adding its determinants to the outer structure of the RSV particle. The failure of RSV to infect certain cells must be explained in terms of limited antigenic determinants in the outer coat of the RSV particle which has not had the aid of the helper virus in its production.[19, 30]

Other tumor viruses also require helper viruses such as the mouse sarcoma virus which requires the mouse leukemia virus as a helper, or the adenovirus group's adeno-associated virus (AAV).[3] Another example of one virus interacting with a helper virus is the unique situation of the growth of adenovirus-7 in SV40-contaminated Rhesus monkey kidney cell cultures. The result is a hybrid virus consisting of a core of SV40 nucleic acid and the protein coat of the adenovirus (adeno-7-SV40+). Pure adenovirus type 7 cannot grow by itself in resistant green monkey cell cultures and needs the aid of the hybrid (adeno-7-SV40+) virus. On the other hand, adeno-7-SV40+ is also defective and needs the help of adenovirus type 2, 7 or 12 to replicate in monkey kidney cells. Inoculation of the mixture (pure adenovirus and adeno-7-SV40+) in monkey kidney cell cultures results in the production of both the adenovirus and hybrid adeno-7-SV40+ particle, but if the mixture is inoculated into a human kidney cell culture there is production of only the adenovirus since adeno-7-SV40+ cannot grow in human cells. If the mixture of adeno-7-SV40+ and pure adenovirus are treated with SV40 antiserum to block any contaminating SV40, then SV40 type tumors are produced in hamsters and on cell culture with the formation of the SV40 T-antigen.[3, 19] This example of the cooperative action of two different groups of viruses to produce a tumor or prevent its development is of great importance in the future study of tumor virus and our understanding of their oncogenic potential.

RSV viruses have recently been found to be able to produce tumors in mammals (adult hamsters and newborn rats, cotton rats, guinea pigs, mice hamsters, and monkeys) using nonproducer cells and the appropriate helper virus. When mammals are infected with RSV, virus production or virus-neutralizing antibodies do not result, as it does in chickens, but tumors are produced. The addition of the specifically antigenic helper avian leukosis virus to mammalian cell cultures does not lead to production of virus particles as it does in the chicken. If virus-free (normal) chicken cells are introduced in the cell cultures or if nonproducing hamster tumor cells are introduced into the

MAJOR RNA TUMOR VIRUSES CHARACTERISTICS

				Adeno and Papova	Adeno-7-SV40+ Hybrid	Human Monkey						
E	Pleomorphic Variable size and shape	--	80-120	Murine Leukemia	Murine sarcoma Gross leukemia Friend leukemia Graffi leukemia Malong leukemia Rauschev leukemia				Common internal "soluble" antigen and subgroup specific envelope	+ mouse + rat + hamster	Budding at cell membrane	Single stranded RNA
E	Pleomorphic Variable size and shape	--	100	Mouse mammary tumor agent	Mouse mammary tumor				Common internal "soluble" antigen and subgroup specific envelope	mouse man	Budding at cell membrane	Single stranded RNA
E			70+0 120	Avian sarcoma and leukosis	Rous Sarcoma V.(RSV) Rous Associated V. (RAV) Fujinami Sarcoma V. Myeloblastosis V. Erythroblastosis V. Lymphomatosis V.				Common internal "soluble" antigen and subgroup specific envelope	chicken turkey rat, duck mouse hamster guinea pig monkey	Budding at cell membrane	Single stranded RNA

Code: 1. Naked or Enveloped (N or E)
2. Symmetry icosahedral or helical
3. Number of capsomeres in icosahedral viron
4. Size of viron in mμ
5. Group
6. Name of disease produced (or) major producing strains
7. Tumor in nstural host: (a) Host, (b) Type of tumor produced, (c) Presence of virus in tumor
8. Antigens in cells of tumor in artificial host
9. Cellular transformation in cultured cells
10. Site of virus production
11. DNA strandedness

NOTE: In section E, column 6 "Malong" should be "Malone" and "Rauschev" should be "Rauscher."

chicken, they lead to production of virus particles.[12] It has been shown repeatedly that the addition of normal cells to transformed cells makes them either produce virus or become more tumorigenic than the originally transformed cells. This evidence suggests the possibility of fusion of tumor cells and adjacent normal cells, and may be a cause for tumor progression in the intact animal.[12]

The possible relationships of viruses and human cancer have led to a great deal of study of possible control of human malignancy. For many years investigators have felt that some viruses may lead to human malignancy, but only recently have laboratory findings pointed to definite evidence of the possibilities of this relationship. Most investigators now agree that not only is viral nucleic acid necessary for infection, but some immunologic changes in the host must occur before infection and transformation can take place. This is best pointed out by the fact that immunologically incompetent cells and live animals are the only laboratory study objects which can be infected with any degree of regularity. The exposure of cell cultures or animals to certain agents such as UV light, drugs or x-irradiation can also lead to an increased incidence of malignant transformation when viral infections are introduced. Viral infections are also known to produce immunosuppression at times, and even transient weakening of the immunologic competence may greatly dispose to tumor transformation. Studies of leukemic patients has revealed a high frequency of leukemia in certain immunologically deficient states. The fact that acute leukemias frequently occur in otherwise healthy children raises the question of events which may lead to transient immunosuppression.[28]

Along this same line it has been found that children with congenital immunologically deficient states often have an increased tendency to develop malignancy of the lmphorecticular system. Recent reports of reticulum-cell sarcoma and other tumors developing in renal transplant patients also indicate that immunosuppression is instrumental in tumor formation.[1] Decrease in the size and degression of the tumors were noted when the immunosuppressive drugs were discontinued.[20]

The search for virus particles first seemed to make progress when electron microscopic studies revealed virus - like particles in the cells and plasma of leukemia patients in a higher frequency than in normal individuals. In some cases tissue cultures of the bone marrow of leukemic patients would form a lymphoblastoid culture which appeared to be malignant. Antisera against concentrated plasma of the leukemic patients frequently reacted with leukemic cells. Soon afterwards doubts arose about the importance of the findings. Many investigators feel that the viruses frequently associated with leukemias may be "passenger viruses" which are common viral contaminants or saprophytes. The irregular detection of virus particles in patients with leukemia and the constant presence of the virus in experimental leukemias have raised the question of the significance of the virus and whether it is a passenger virus.[8]

In 1958, Burkitt described a lymphoma in African children which suddenly brought human cancer virus study into a new focus. Since 1963 a great deal of work has been focused on the lymphoma. The most striking finding has been the fact that cultures of lymphoma cells contain viral particles, although the tumor cells in the patient do not. The appearance of virus particles in cell cultures is not unique to Burkitt's lymphoma, since cell cultures of adenoids and salivary glands frequently show cytomegalic viruses or adenoviruses.[8] Only a small number of the Burkitt's lymphoma cells are infected by a herpes-like virus known as the Epstein-Barr Virus (EB virus). The presence of this virus in cell cultures of Burkitt's lymphoma has been demonstrated by immunofluorescence and electron microscopy in 0.3 per cent to greater than 25 per cent of cells.[21] Sera from Burkitt patients also react in immunofluorescent tests with Burkitt lymphoma cells in cell culture but the sera of many normal individuals also give the same reaction.[8] The discovery of the reason why the sera of many normal individuals from all over the world reacted with the Burkitt lymphoma cells was made quite by accident. One of the laboratory technicians in the Henle Group donated blood for control sera which consistently produced a negative reaction, but after she became ill with infectious mononucleosis her serum became consistently positive. Since then investigators have found the same virus particles and immunofluorescent findings in both Burkitt's lymphoma and infectious mononucleosis.[22, 24, 25] These findings have led to some confusion since it is apparent that the EB virus may be the etiologic agent of both diseases or it may only be another "passenger virus." Some have suggested that perhaps a "helper" virus is necessary as found in the avian leukosis viruses, but this has not been confirmed. Furthermore, the virus from Burkitt's lymphoma has not been purified or seen in the tumor cells themselves, although indirect evidence suggests the presence of the viral genome. Another confusing issue is the presence of several other passenger viruses in the Burkitt lymphoma cells. When normal human leukocytes, which are infected by a herpes-like virus, are cultured with lymphatic cells from infectious mononucleosis patients, a permanently growing cell line results which is transformed in some manner. This suggests that herpes virus is a transforming agent, but definite proof of malignant transformation has not been demonstrated.[8]

Human cervical cancer is also felt to have some etiologic relationship to a herpes virus infection. Females with carcinoma of the cervix have antibodies to herpes virus type 2 in 83 per cent of the cases in a large series. In a control group with no evidence of cervical carcinoma zero to 20 per cent have herpes type 2 antibodies.[3, 15] In a prospective study, 245 patients were found to have cytologic evidence of a genital herpes infection with the presence of inclusion bodies in the cells on the Papanicolaou smear. Ninety-eight of these women had cervical biopsies, 24 per cent of which showed anaplasia. Four cases of invasive carcinoma and 10 cases of carcinoma *in situ* were found for a total of 16 per cent with definite evidence of carcinoma.[15] This evidence is felt to suggest a carcinogenic or co - carcinogenic role of herpes-type 2 in carcinoma of the cervix.

Recent electron microscopic studies on human breast cancer reveal particles resembling the identical virus particles found in mouse mammary carcinoma. There is also a smaller virus particle present in human breast cancer in addition to the two particles found in mouse mammary carcinoma. Tissue culture of human breast carcinoma also reveals that the particles remain associated with the cells after many passages in tissue cultures.[7] Electron microscopic studies of human milk by three investigators have demonstrated virus-like particles in human milk resembling murine oncogenic RNA virus.[11] Spread of the mouse mammary carcinoma virus by pinocytosis and a budding process with direct cell to cell transfer has recently been demonstrated by electron microscopy.[14] The hormonal effects, age and pariety of the patient as well as viral infection have all been found to be involved in the development of mammary carcinoma in the mouse and correlations to human breast cancer have been drawn.

The future holds as many difficulties as bright possibilities of understanding the viral-host interaction leading to malignant transformation of cells. Many investigators are looking beyond just understanding the viral-host interaction with thoughts of controlling or preventing malignant transformation. Extensive study is being carried out in the field of vaccines and the use of interferon. Vaccines are looked upon more and more as important means of controlling human cancer if they are indeed produced or triggered by viruses. Experiments using SV40 in live hamsters have shown a 3 to 7-fold suppression of tumor formation if a vaccine against the SV40 virus is given within 34 to 76 days after viral infection. If the vaccine is given prior to a tumor-producing dose of SV40, there may be complete prevention of development of the tumor. The study of vaccines in man has been greatly hindered by regulations regarding the use of live vaccines containing an oncogenic virus. Most investigators now feel that malignancy may be prevented by immunization against the virus itself, either in the early postnatal period or by stimulation of antibody production in the mother to provide protection by maternal antibodies during the period following birth and prior to development of total immunologic competence. Another approach would be to give the vaccine later in life to prevent viral infections leading to malignancy.[23] Recent work by the Hellstroms at the University of Washington has indicated that the immunologic approach to malignancy is far from simple. The body maintains control of a tumor by either responding with antibodies against the tumor and its destruction, or blocking antibodies develop which prevent such a response to the tumor despite the fact that the patient's immune lymphocytes are capable of destroying the tumor.[20]

The interferons, which are natural cellular proteins, are believed to turn on or induce the formation of certain regulator genes which regulate the nucleic acid metabolism and possibly that of the lysogenic transforming virus also.[31] Interferon inhibits the multiplication and cellular transformation by oncogenic viruses *in vitro*. In live animals infected by tumor viruses, interferon has been shown to delay the appearance of the tumor, reduce the size and number of tumors produced and increase animal survival. In leukemias produced by Friend and Rauscher viruses, the repeated injection of interferon proved effective even when treatment was started after the onset of clinical disease. Mice with solid tumors have been treated with interferon with the result of increased survival and inhibition of growth of these tumors. One French study of 18 patients with acute leukemia treated with interferon revealed increased survival time, but no conclusions can be drawn from the study.[16] Recent investigations indicate that giving interferon is not practical because of difficulties of production and the resulting small quantities. These investigators advocate the administration of an inducer substance which leads to host interferon production in increased quantities and suppression of the tumor.[6]

In summary, it may be stated that many virus-host relationships are known and presently under investigation which may contribute significantly to our understanding of the mechanisms involved in some human malignancies and their control.

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Acute Cor Pulmonale in a Child with Ventriculo-Atrial Shunt. Prompt Recognition and Medical-Surgical Management—A Case Report*

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and
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IN 1957 Pudenz and his colleagues were able, for the first time, to shunt cerebrospinal fluid from the cerebral ventricles into the right atrium and thus to initiate a new approach in the management of obstructive hydrocephalus.[1] It has been noted, however, that the insertion of the tube into the right auricle is associated with important complications, such as obstruction of the shunt tube, systemic infections, endocarditis, pulmonary thromboembolic manifestations, and cor pulmonale.[2-5]

The establishment of cor pulmonale, which rapidly results in right heart failure, represents a serious side effect of shunt procedure, and undoubtedly early recognition and treatment of this condition is of utmost importance for the survival of the patient.

A review of the literature related to the subject reveals that most of the studies only attempted to delineate the nature of complications of ventriculo - atrial shunting and were based on both living patients and autopsy material.[6-9] However, we have been unable to find any report concerning the therapeutic approach in established cor pulmonale secondary to ventriculo-atrial shunting of cerebrospinal fluid other than the palliative medical regimen, which includes digitalization, diuretics, and antibiotics.

The purpose of this report is to present the case of a 30 month old female with hydrocephalus, ventriculo-atrial shunt, and severe cor pulmonale, who was successfully treated with prompt removal of the tube from the right atrium and establishment of a ventriculo-peritoneal shunt.

The patient was born on 3-28-67 following a 7 month pregnancy which was otherwise unremarkable. The patient's weight at birth was 7 lbs, she was 19 inches tall, and she had a head circumference of 13 inches. Significant clinical findings at birth were a draining myelomeningocele, approximately 6x5 cm in the lumbar area, paralysis below the level of L-1, constant dribbling of urine, and a patulous anal sphincter.

On 4-3-67 a right ventriculo-atrial shunt was carried out and the myelomeningocele sac was partially decompressed. Revision of the shunt was carried out on 4-14-67 because of nonfunctioning Pudenz pump. An electrocardiogram taken on 5-10-67 was normal for age.

On 9-21-67 the myelomeningocele sac was excised. In the next six months the ventriculo-atrial shunt had to be revised twice, in order to relieve obstruction and eliminate infection.

Cardiopulmonary evaluation on 4-4-68 was considered normal. The patient was readmitted to the hospital on 6-6-69 because of urinary tract infection, and was dismissed as improved on 6-12-69. A cardiopulmonary evaluation at that time was within normal limits.

The patient's condition apparently became worse following her dismissal from the hospital, and cardiorespiratory distress prompted her rehospitalization on 11-11-69.

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On physical examination she appeared to be acutely ill with moderate circumoral cyanosis and clubbing. The liver was 4 cm below the right costal margin, and tender. The neck veins were not distended. There was a grade I-II systolic murmur over the left mid-sternum, and considerable increase of the second heart sound over the pulmonary area. The chest x-ray was interpreted as showing an interstitial fibrotic process, and the electrocardiogram showed marked right axis deviation, prominent P waves, QR pattern in V4R and deep S waves in V6, all indicative of right atrial and right ventricular enlargement (Figure 1). Blood culture grew staphylococcus aureus, coagulase positive.

The ventriculo-atrial shunt was functioning normally. However, due to the deteriorating cardiac condition of the patient, and in keeping with the accumulated experience from the literature indicating the unfavorable prognosis in those shunted cases developing cor pulmonale, we recommended removal of the ventriculo-atrial shunt, which was carried out on 12-2-69. The cerebrospinal fluid was cloudy. Therapy with ampicillin, kanamycin, and cephalothin had been continuous since admission. Following the shunt's removal the patient developed symptoms of increased intracranial pressure neces-

FIGURE 1

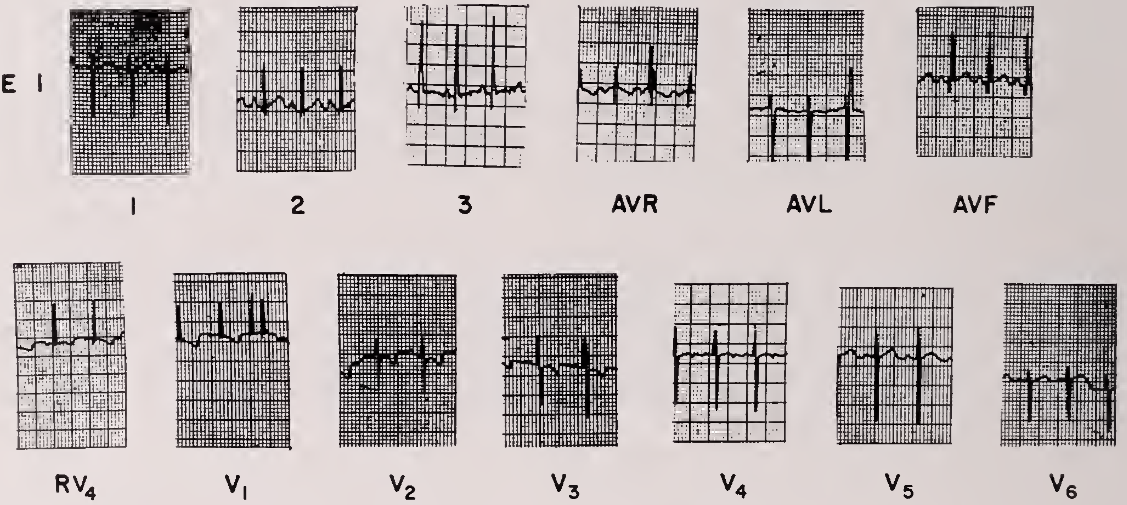

Figure 1. Right axis deviation, prominent P waves in Lead II, Q waves in V4R1, deep S waves in V5-V6. Sensitivity: 2 mv = 10 mm.

FIGURE 2

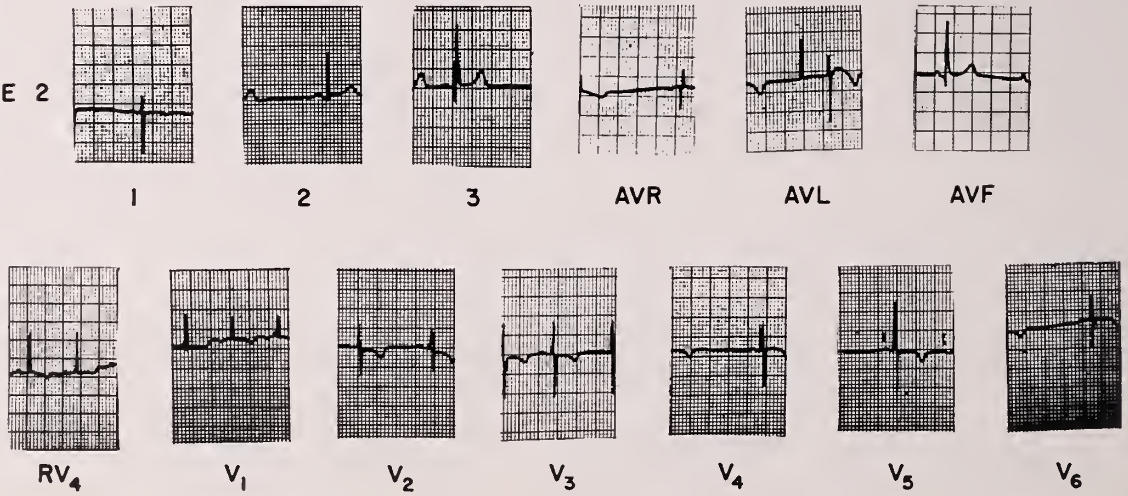

Figure 2. Right axis deviation, normal P waves in Lead II, absence of Q waves in RV4-V1, less prominent S waves in V5-V6. Sensitivity: 2 mv = 10mm.

sitating repeated ventricular taps for alleviation.

On 12-15-69 a right ventriculo-peritoneal shunt was established. The patient's condition showed steady improvement afterwards. The circumoral cyanosis gradually disappeared and the liver's size decreased rapidly. The intensity of the second heart sound over the pulmonary area returned to normal. The electrocardiogram ten days after removal of the shunt from the right atrium showed considerable improvement (Figure 2). The shunting of the cerebrospinal fluid into the peritoneal cavity was accepted quite satisfactorily, and the patient was dismissed on 12-24-69.

Comment and Summary

The development of pulmonary thromboembolic changes in patients with shunted cerebrospinal fluid into the right atrium has been very well documented and undoubtedly represents a life-threatening complication due to concurrent pulmonary hypertension and subsequent cor pulmonale. Early recognition of these changes appears to be of crucial importance if the patient is to survive. Removal of the shunt tube from the right atrium may reverse the process in the cardiopulmonary system. We believe that electrocardiograms and chest x-rays taken at regular intervals are valuable laboratory means, along with the clinical evaluation, in detecting early deviations from the normal. Deviation of the mean electrical axis to the right and evidence of right ventricular hypertrophy in the electrocardiogram are strong indications for considering the removal of the shunt tube from the right atrium.

The above reported case represents an overwhelming development of cor pulmonale in a 30 month old female with ventriculo-atrial shunt who was successfully managed by promptly removing the tube from the right atrium and establishing a drainage of cerebrospinal fluid into the peritoneal cavity.

Abstract

A 30 month old female with atrioventricular shunt developed overwhelming cor pulmonale. Prompt removal of the shunt from the right atrium and drainage of cerebrospinal fluid into the peritoneal cavity resulted in a dramatic improvement.

Electrocardiography and chest x-ray, along with clinical evaluation, are stressed as valuable means in detecting early deviations from the normal.

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Transient Complete Right Bundle Branch Block in Cardiac Contusion

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Introduction

SEVERAL military hospitals have recently described cases of transient right bundle branch block following nonpenetrating wounds of the chest.[1, 2] These aviators fortunately had electrocardiograms before their accidents and serial electrocardiograms after their trauma revealed the transient nature of the bundle branch block. It is our purpose to describe a similar case occurring in a civilian population. We wish to point out the importance of the cardiac evaluation following any injuries to the upper abdomen or chest and to emphasize the importance of routine electrocardiograms in healthy young patients.

Patient Summary

On 11-1-69 a 32 year old male physician was admitted to our hospital following an automobile accident in which he was struck from the left side by another auto causing extensive damage to his Volkswagen. He was probably struck in the left chest by his steering wheel but had a period of temporary unconsciousness and did not remember the exact details of the accident. He was brought to the hospital at which time he was alert and oriented, complaining of left lower chest pain, substernal pain, and marked difficulty breathing. In the Emergency Room he was hypotensive but soon stabilized. The pain in the left chest was pleuritic and over the next few hours improved considerably with analgesics. Shortness of breath also improved so that the patient was reasonably comfortable by 9 a.m., eight hours following admission.

Physical examination following stabilization showed the blood pressure to be 120/80 without a paradoxical pulse. The neck veins were not distended, with a negative Kussmaul sign. The venous pressure was 4 cm of water. There were decreased breath sounds over the entire left chest, an area of tympany over a markedly dilated gastric air bubble which was quite elevated in the left chest. There was no rub and no third heart sound. The heart sounds were easily heard. There was some minimal tenderness in the left inframammary area. The remainder of the physical examination was essentially negative.

Initial electrocardiogram showed complete right bundle branch block with secondary ST-T wave changes. (Fig. 1). It was of interest that the patient had an electrocardiogram performed three weeks prior to this admission because of a bout of sinus tachycardia which showed incomplete right bundle branch block only. (Fig. 2).

Initial chest film did not show cardiac enlargement. The gastric air bubble was markedly dilated and there was marked elevation of the left hemidiaphragm. It was felt that the patient had a cerebral concussion, traumatic eventration of the left diaphragm, and a mild cardiac contusion. Chest x-ray showed no rib fractures.

Over the next several hours there was infiltration of fluid below the left diaphragm. By 24 hours after the initial electrocardiogram the conduction defect both complete and incomplete had disappeared and only non-specific ST changes and T wave inversion remained. (Fig. 3).

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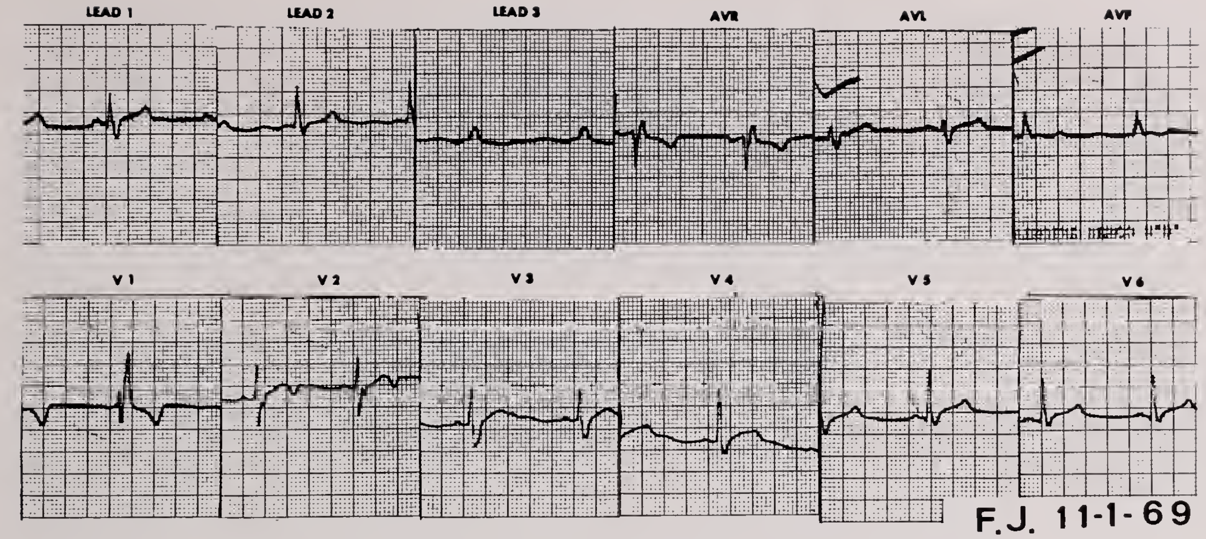

Figure 1. Electrocardiogram on 11-1-69, immediately after accident demonstrating sinus rhythm, complete right bundle branch block and secondary ST-T wave changes.

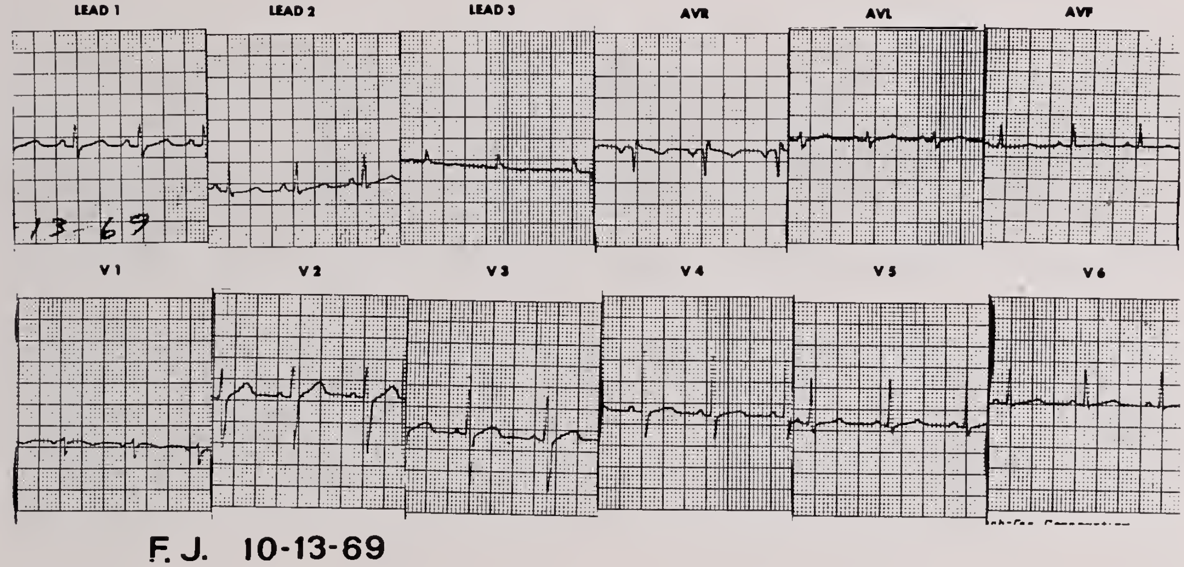

Figure 2. Electrocardiogram on 10-13-69, three weeks prior to accident demonstrating sinus rhythm and incomplete right bundle branch block.

The initial hemogram was normal. Over the next several hours a significant leukocytosis of 17,000 developed with a left shift. This fell to normal in 48 hours. The hematocrit, initially 45, fell to as low as 37 two days after admission and then stabilized. He developed transient hematuria, felt to be due to contusion of the left kidney. An upper GI series showed definite herniation of the stomach into the left chest. An LDH isoenzyme obtained on 11-12-69 showed an approximately 1:1 ratio of fractions 1 and 2, with the peak of 1 being higher than the peak of 2. An electrocardiogram taken on 11-11-69 showed total absence of any conduction defect and the ST-T wave changes were no longer present. (Fig. 4).

He was taken to the operating room on 11-14-69 where a left thoracotomy and laparotomy were performed. A laceration of the liver and spleen were discovered and splenectomy was performed. The left diaphragm was repaired, and no obvious trauma to the pericardial sac was noted. After an

The Management of High Enterocutaneous Fistulas[*]

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Summary

WITHIN 48 hours, parenteral hyperalimentation caused an 85 percent reduction in the volume of drainage from high enterocutaneous fistulas in three patients. One of them died from other causes, but all three demonstrated rapid healing of their fistulas after receiving parenteral hyperalimentation.

Parenteral hyperalimentation promotes rapid healing of high enterocutaneous fistulas by decreasing the volume and content of some digestive secretions, and by producing positive nitrogen balance. Liquid elemental feedings provide good nutritional support if complications from parenteral hyperalimentation occur, but lack the powerful suppressive effect on digestive secretions.

Although distal obstruction, foreign body, epithelialization, granulomatous infection, and carcinoma in a fistulous tract require early operation, either parenteral hyperalimentation or a liquid elemental diet is superior to operative correction of most high enterocutaneous fistulas.

Introduction

Recent advances in the metabolic care of the surgical patient have significantly reduced the mortality and morbidity from high enterocutaneous fistulas.[1-5] Parenteral hyperalimentation and liquid elemental diets both produce positive nitrogen balance and lead to closure of these fistulas. We will present four patients with high enterocutaneous fistulas and discuss the mechanisms by which parenteral hyperalimentation promotes healing of these fistulas. We will also define the roles of parenteral hyperalimentation, liquid elemental diet, and operation in the treatment of patients with this dangerous complication.

Case I

A 27 year old intoxicated man sustained blunt abdominal trauma from a steering wheel injury. At operation 2½ hours later, we did not explore a retroperitoneal hematoma of moderate size at the base of the mesentery and in the right colic gutter. After a week of high postoperative fever, massive hematemesis occurred. A second operation demonstrated a large tear in the retroperitoneal duodenum distal to the ampulla of Vater. We closed the duodenal defect, performed a gastrostomy and a feeding jejunostomy, and inserted four sump drains. Drainage from the right upper quadrant drains began within 48 hours of operation and rapidly increased to rates of 1,000 to 4,000 ml/day. This drainage contained large amounts of bile and amylase. In spite of antibiotics, nasogastric suction, adequate replacement of fluid and electrolytes, and jejunal feedings, the patient died of sepsis and cachexia 55 days after admission.

Case II

A 36 year old intoxicated man sustained a perforation of the retroperitoneal duodenum from a steering wheel injury. The patient refused operation until seven hours after admission. At operation we resected two inches of duodenum distal to the ampulla of Vater and performed a duodenoduodenostomy. Bile stained drainage began to appear from the right upper quadrant sump drain on the second postoperative day. Nine days later we began parenteral hyperalimentation. Fistula drainage decreased from 900 ml/day to less than 100 ml/day within 48 hours. A second course of parenteral hyperalimentation caused the same response after fistula drainage recurred. After drainage of a large subhepatic abscess on the 47th day of hospitalization, the patient recovered. His weight loss was 25 lbs after 65 days of hospitalization and 55 days of negligible oral intake.

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Case III

A 51 year old man underwent a cholecystectomy. Thirteen days later, resection of 60 cm of small intestine and drainage of a right subphrenic abscess were necessary after development of a small bowel obstruction. Seven days later, three high enterocutaneous fistulas occurred. Fistula drainage decreased from an average of 1,000 ml/day to an average of 150 ml/day soon after the beginning of parenteral hyperalimentation. Fistula healing occurred a few days later. This patient died of a fulminant Gram-negative and staphylococcal pneumonia and a Gram-negative intra-abdominal abscess 33 days after the second operation. He also had chronic constrictive pericarditis. However, at autopsy, the enterocutaneous fistulas had completely healed.

Case IV

A 41 year old man sustained gunshot wounds of the abdomen, right wrist, and both sides of the chest. Operation consisted of insertion of bilateral chest tubes, splenectomy, closure of perforations of the stomach and transverse colon, and loop colostomy. We drained a left subphrenic abscess 18 days later. Small bowel contents began to drain through the wound the same day.

Figure 1 shows the difference in fistula drainage with nasogastric suction and intravenous fluids; with parenteral hyperalimentation and clear liquid oral feeding; and with parenteral hyperalimentation alone. We began parenteral hyperalimentation on the ninth postoperative day but discontinued it

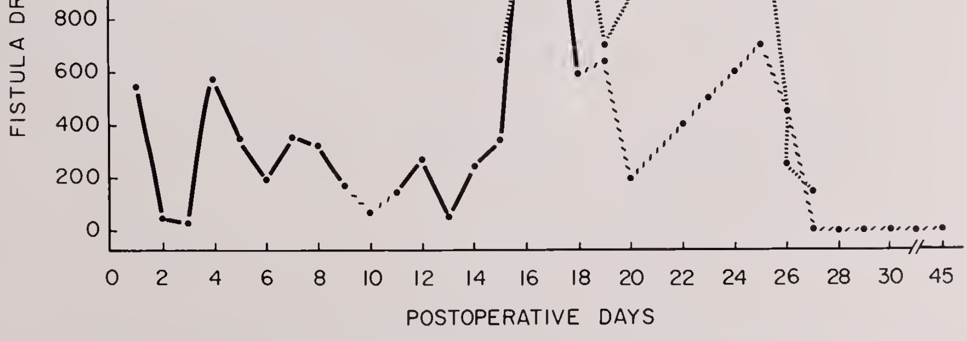

Figure 1. Jejunocutaneous fistula drainage in Case IV showing continued high fistula drainage during parenteral hyperalimentation and oral feeding, and rapid cessation of fistula drainage during parenteral hyperalimentation alone.

two days later because of infection at the intravenous catheter site. The patient began clear liquid oral feedings on the 15th postoperative day, and we started parenteral hyperalimentation through the left subclavian vein three days later. A high daily volume of fistula drainage persisted until we discontinued oral feedings on the 27th postoperative day. The patient recovered thereafter with no further complications.

Discussion

High enterocutaneous fistulas cause sepsis, malnutrition, fluid and electrolyte depletion, skin erosion, and hemorrhage.[6] Fifty percent of these patients die in spite of the exhaustive efforts of medical and hospital personnel.[7, 8] Our first patient is a good example of the disastrous results often seen with such fistulas.

Most authors advise either early fistula resection or a diverting procedure in patients who develop high enterocutaneous fistulas draining large quantities of fluid. Certainly an operative approach is necessary when distal obstruction, foreign body, epithelialization of the fistulous tract, granulomatous infection, or carcinoma would lead to delay in closure.[9] Elman first reported parenteral hyperalimentation using a solution similar to those currently used. However, the hyperosmolar solution rapidly caused thrombosis in all available peripheral veins, preventing prolonged usage and precluding widespread application of this technic. Dudrick has

Table 1

EFFECT OF PARENTERAL HYPERALIMENTATION ON DRAINAGE FROM HIGH ENTEROCUTANEOUS FISTULAS

Author	Fistula	Fistula Loss 48 Hours After PHA	Further Treatment
Brunschwig, et al 1945	high enterocutaneous	reduced to a minimum	partial enterectomy to restore continuity
Bigham, et al 1947	*(1) enterocutaneous	0	right hemicolectomy for carcinoma
	*(2) internal colon fistulas enterocutaneous	minimal	resection of colon fistulas. small bowel resection. parenteral feeding stopped. lower abdominal fistula remained open. patient died.
	*(3) appendicocutaneous (patient also had ulcerative colitis)	decreased	right colectomy
Thomas & Ross 1948	pancreatic	150-175 ml	none
Hull & Barnes 1951	(1) enterocutaneous	0	ileocolostomy for regional enteritis
	(2) enterocutaneous	0	small bowel resection
	(3) enterocutaneous	0	none
	(4) enterocutaneous	minimal	small bowel resection for regional enteritis
	(5) enterocutaneous	decreased	small bowel resection
	(6) enterocutaneous	minimal	none
Zajtchuk, et al 1969	(1) pancreatic	marked reduction	fistula closure
	(2) pancreatic	marked reduction	Roux-en-Y pancreato-jejunostomy
Dudrick, et al 1970	(1) gastroduodenal and/or pancreatic	decreased appreciably	none
	(2) duodenocutaneous	decreased	none
	(3) duodenocutaneous	decreased	none
Hamilton, et al 1971	(1) duodenocutaneous	marked reduction	drainage of subhepatic abscess
	(2) enterocutaneous	marked reduction	none
	*(3) enterocutaneous	marked reduction	none

*—No decreased fistula drainage during parenteral hyperalimentation while on oral feedings.

made parenteral hyperalimentation a useful clinical tool by infusing the nutrients through a subclavian intravenous catheter. He has documented weight gain and positive nitrogen balance in all of his patients. Some of them with high enterocutaneous fistulas demonstrated marked decrease in fistula drainage. Several other authors have also reported reduction in fluid losses from pancreatic and enterocutaneous fistulas in patients receiving parenteral hyperalimentation (Table 1). [11-15]

Stevens and Randall have given similar patients a liquid elemental diet by oral, gastric, or jejunal routes. Their patients returned to positive nitrogen balance. They reported a 15 percent mortality rate and demonstrated a gradual 50 percent reduction in fluid losses from these fistulas.

Using Dudrick's protocol, we have given 3,000 to 5,000 ml/day of a solution containing 20 percent dextrose and 3.5 percent protein hydrolysate in water. This solution provides about one calorie per cc. Although our patients gained weight, they did not reach their normal weights during treatment. Fluid losses from high enterocutaneous fistulas in our patients rapidly decreased by 85 percent or more after initiation of parenteral hyperalimentation. Case IV did not show this response while on a clear liquid diet.

We have previously reported experimental results in five mongrel dogs which demonstrated that parenteral hyperalimentation reduced the volume of secretions from the duodenum by 50.5 percent during secretin and pancreozymin stimulation. In addition the secretion of amylase decreased by 70.8 percent; excretion of bilirubin decreased by 86.2 percent; protein content of duodenal drainage decreased by 73.1 percent; and bicarbonate concentration increased by 18.2 percent. Parenteral hyperalimentation had no apparent effect on the volume or pepsin content of gastric secretion.[16]

It is apparent from these clinical observations and experimental results that parenteral hyperalimentation promotes healing of high enterocutaneous fistulas by decreasing the volume of fistula drainage, altering the quantity of caustic material in this fluid, and restoring the patient to positive nitrogen balance.

By virtue of its greater suppressive effect on some upper gastrointestinal secretions, parenteral hyperalimentation is probably superior to liquid elemental diets in the treatment of high enterocutaneous fistulas. However, a liquid elemental diet should be useful if a complication, such as infection at the site of catheter insertion, precludes further use of parenteral hyperalimentation. With the development of these methods of treatment, we believe early operation is no longer indicated for most high enterocutaneous fistulas.

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Maternal Mortality in Nebraska — 1969

JOSEPH C. SCOTT, JR., M.D.*

THIS is now the Fourth Annual Report on Maternal Mortality from the Maternal-Child Health Committee of the Nebraska State Medical Association. Committee members in 1969 were:

- Warren G. Bosley, Chairman, Grand Island
- Hodsen Hansen, Lincoln
- Robert F. Getty, North Platte
- William Rumbolz, Omaha
- L. R. Smith, Kearney
- J. A. McMillen, Hastings
- Harold S. Morgan, Lincoln
- Warren Pearse, Omaha
- Robert Kugel, Omaha
- Riley Kovar, Omaha

It is through the efforts of this committee, the Nebraska State Medical Association, and the Public Health Service that this report is possible.

Maternal death is defined as "the death of any woman dying of any cause whatsoever while pregnant, or within 90 days of the termination of the pregnancy, irrespective of the duration of the pregnancy at the time of the termination or the method by which it was terminated."

Using this accepted definition, Nebraska had recorded eight maternal deaths in 1969. Ten cases were reported but two of these, case 69-1 and 69-6, do not fit within the definition, and therefore are reported but excluded from the total figures.

A tabular summary of the reported cases revealed:

Table 1

MATERNAL MORTALITY STUDY, 1969
STATE OF NEBRASKA

Case No.	Age	Diagnosis
69- 1	31	Abdominal hemorrhage presumed ectopic. Not confirmed at autopsy.
69- 2	29	Acute pulmonary infection due to influenza at 3½ months pregnancy
69- 3	19	Chorioepithelioma with metastasis to lung.
69- 4	27	Acute congestive heart failure with pulmonary edema following cesarean section.
*69- 5	17	Renal failure and uremia due to toxemia.
*69- 6	30	Infiltrating duct cell carcinoma breast 5 months following delivery.
69- 7	36	Anoxia due to pulmonary atelectasis due to anesthesia for cesarean hysterectomy.
69- 8	29	Hemorrhage due to ruptured uterus and infection.
69- 9	25	Hemorrhage due to uterine rupture due to previous cesarean section.
**69-10	34	DOA postpartum drug ingestion.
**69-11	27	Subdural hemorrhage, skull fracture, convulsions, pulmonary edema 40 days postpartum.

*—form not returned

**—not picked up by vital statistics

During 1969 the number of births in the United States rose, thus ending the trend downward that began in 1962. In 1969 births were increased by about 2 percent over the 1968 level. Table 2, taken from U.S. Department of Health Education and Welfare Public Health Service Vital Statistics Reports reflects this small but significant trend.

Table 2

Year	Birth Rate Per 1,000 Population
1969	17.7
1968	17.5
1967	17.8
1966	18.4
1965	19.4
1964	21.0
1963	21.7

The birth rate rise in 1969 is most likely attributed to an increase in the number of women in the childbearing ages rather than to an increase in the rate at which women are bearing children.

Data collected by state of origin indicate that the number of births increased in all but eight states in 1969. Nebraska was one of these, however, here the difference was a total decrease of only six births.

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The deaths of an estimated 980 women were assigned to complications of pregnancy, childbearing, and the puerperium in 1969 for the United States. The provisional maternal mortality rate was 27.4 per 100,000 live births. In previous years the rate per 100,000 live births were:

Table 3

	Birth Rate Per 1,000 Live Births
1969 (est.)	27.4
1968 (est.)	27.4
1967	28.0
1966	29.1
1965	31.6
1964	33.3
1963	35.8
1962	35.2
1961	36.9
1960	37.1

The trend, fortunately, clearly demonstrates a reduction in the maternal mortality rate during the past decade.

For Nebraska, the rate per 10,000 live births is as follows in recent years:

Table 4

Year	Number of Deliveries	Maternal Deaths	Rate Per 10,000 Births
1965	27,829	9	3.2
1966	25,709	10	3.9
1967	24,205	11	4.5
1968	24,351	9	3.60*
1969	24,345	9	3.71

*—Revised from last report.

The cases in Nebraska are briefly summarized:

Case 69-1 — This 31 year old female died 8 hours after hospitalization with intra-abdominal hemorrhage. Ectopic pregnancy was suspected but autopsy did *not* confirm this diagnosis. Therefore this case is not included as a maternal death.

Case 69-2 — A 24 year old patient in month 4 of pregnancy died 48 hours after hospital admission and active therapy for influenza. No autopsy.

Case 69-3 — A 19 year old patient had a molar pregnancy in November 1968. Afterward, three individual uterine curettages followed. A pelvic mass diagnosed as chorioepithelioma was incompletely removed in April 1969, and the patient expired three weeks following the surgery. Autopsy showed metastatic chorioepithelioma in the lungs.

Case 69-4 — This 27 year old patient had a primary cesarean section performed under general anesthesia because of a low lying anterior partial placenta previa and third trimester bleeding. Following delivery, the patient's vital signs gradually deteriorated, and she expired approximately 9 hours later. Postmortem examination revealed marked pulmonary congestion and edema, bilateral pleural effusions, and subendocardial hemorrhages. Death was attributed to acute congestive heart failure, acute myocarditis, and pulmonary edema.

Case 69-5 — This 17 year old female with a history of psychosis and heart murmur developed severe hypertension, anuria, and gastrointestinal bleeding, and died 10 weeks following delivery. Death was attributed to renal failure and uremia. Necrotizing vasculitis involving the kidneys and skeletal muscle "due to toxemia of pregnancy" was reported.

Case 69-6 — A 30 year old woman died approximately 5 months following the termination of pregnancy, because of an infiltrating duct cell carcinoma of the right breast with lung metastases. Because this case is beyond the 90 day limitation, it is not included in the final statistics.

Case 69-7 — This 36 year old multigravida died during elective cesarean section and hysterectomy marked by excessive bleeding while the abdominal wound was being closed. The summary report revealed atelectasis of the lungs and the death was related to anoxia.

Case 69-8 — A 24 year old multigravida died 4 hours after spontaneous delivery of a liveborn infant at term. A large cervical laceration extending into the uterus resulted in postpartum hemorrhage, multiple transfusions, and hysterectomy. Death was attributed to hemorrhage and ruptured uterus.

Case 69-9 — A 25 year old multigravida died during an emergency repeat cesarean section at 36 weeks gestation from a ruptured uterus and hemorrhage.

Case 69-10 — This 35 year old multigravida arrived dead on arrival three weeks postpartum. Autopsy revealed congestion and edema of lungs, liver, spleen, and kidneys. Toxicological reports showed the presence of Valium and Mebaral. Cause of death was related to respiratory depression and anoxia secondary to a combination of these drugs.

Case 69-11 — This 27 year old secundigravida had a normal prenatal course and uneventful delivery and postpartum course. Death occurred 40 days after delivery. While shopping, she had a seizure, fell and struck her head and later had further seizures and rapid deterioration in the hospital. Autopsy revealed a subdural hematoma, left posterior skull fracture, cerebral edema, and terminal pulmonary edema and hemorrhage. The precise cause of the initial seizure remains unknown.

Direct obstetric deaths are felt to be a factor in six cases (3, 4, 5, 7, 8, 9). Indirect obstetric causes were present in the remaining three cases (2, 10, 11). Patient deaths that do not fall within the definition of maternal mortality were present in 2 instances (1, 6).

Several factors are worthy of note with the above cases. Hemorrhage was a significant problem in 3 cases (5, 8, 9). Infection contributed to 2 deaths (2, 8). Anesthesia (7) and fluid replacement (4) probably contributed to 1 death each, as did toxemia (5) and malignancy (3).

Of this group of 9 maternal deaths, 3 patients had cesarean section (4, 7, 9) and 2 (8, 9) had ruptured uteri.

It would appear then, that in Nebraska in 1969, infection and/or hemorrhagic complications of pregnancy were present in 5 of 9 maternal deaths.

Appreciation is extended to those physicians who took the time and effort to submit detailed reports on the deaths in 1969. This information will continue to be of interest to physicians throughout the state and has been valuable for undergraduate and graduate education in our medical schools and professional societies.

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Congenital Heart Disease In the First Year of Life

SIDNEY BLUMENTHAL, M.D.
and
MARY JANE JESSE, M.D.

SURGICAL advances in the past two decades in the management of patients with congenital heart defects have been truly spectacular. These results have been achieved for the most part in older children and adults. It is somewhat sobering to note, however that 95% of deaths due to these defects occur in the first year of life, most in the first six months. Twenty percent of patients with congenital cardiac defects develop congestive heart failure; 90% of these patients are less than one year of age. The present thrust must be directed toward the treatment of the young infant. To ensure success, an aggressive approach is necessary in which the physician supplying "first-line" care (generalist or pediatrician) becomes a participant in the team which includes the pediatric cardiologist and cardiovascular surgeon. Pediatric cardiologists and cardiovascular surgeons are, for the most part, aware of their role. The "first-line" physician needs to recognize his role as an active participant so that infants in jeopardy will be recognized and treated early or the total endeavor is doomed to failure.

A small number of anomalies are responsible for congestive heart failure or death in most infants. Palliative or corrective surgery in infancy is available for infants with anomalies listed in Table 1, while there is no surgical relief for those with anomalies listed in Table 2, as well as in some of the more complicated lesions seen less frequently.

It is not essential for the generalist to make an exact anatomical diagnosis; this is required of the pediatric cardiologist. Identification of the infant in early heart failure and those with a predisposition to hypoxic "spells" or sudden death is the generalists chief role. This will enable him to identify the infant requiring emergency or early referral to a center equipped and staffed to perform the necessary diagnostic studies with a minimum of risk to the infant.

Table 1

ANOMALIES AMENABLE TO SURGERY

Acyanotic	Cyanotic
Vent. Septal Defect	Tetralogy Fallot
Atr. Septal Defect	Transposition Complex
Patent Duct. Art.	Tricuspid Atresia
Coarctation Aorta	Pulmonary Atresia
Pulmonic Stenosis	Total Anom. Pulm. Veins
Aortic Stenosis	

All infants known to have a congenital cardiac anomaly should be followed closely during the first six months, their period of greatest risk. Most do not require referral to a large center. The thriving asymptomatic infant should have an electrocardiogram and x-ray of the chest performed at about one month of age. If these are normal, subsequent referral may be indicated on an elective basis.

Emergency referral to a center is indicated for infants who show signs of congestive heart failure or in whom the electrocardiogram reveals a "strain" pattern of either left or right ventricle. In the cyanotic infant, emergency referral is indicated in those with a history of hypoxic "spells," respiratory distress, evidence of pulmonary plethora in the chest film or right ventricular "strain" in the electrocardiogram. Procrastination results in decreasing myocardial function resulting from hypoxia and acidemia.

Congestive heart failure in the infant is usually insidious in onset. Decreased cardiac

Table 2

NO AVAILABLE SURGICAL RELIEF

Hypoplastic left heart syndrome
Endocardial fibroelastosis

*Prepared by the American Heart Association for this Journal.

output results in fatigue usually manifested by feeding difficulty. The infant sucks eagerly, but fatigues after taking a few ounces of formula. He soon becomes hungry, takes a few more ounces and falls off to sleep. A vicious cycle develops, easily confused with intolerance to formula, "colic" and "failure to thrive." Grey, mottled cold extremities indicative of vasoconstriction are a homeostatic response to an inadequate cardiac output.

Tachypnea is usually the earliest manifestation of heart failure in the infant. Pulmonary venous congestion secondary to left heart failure is manifested by tachypnea. Respiratory rates over 50/minute are abnormal in the quietly resting infant. Those in failure commonly exhibit respiratory rates of 60-100/minute and, at times, 120-150/minute. In addition to tachypnea, one may note intercostal and sternal retraction and eventually bronchial congestion with cough and bronchospasm. Rales, in the absence of infection, are only seen in late stages of heart failure. Tachypnea is accompanied by tachycardia and often a gallop rhythm heard best about 0.10 seconds after the second sound, often resembling a third heart sound. Pulmonary venous congestion may be identified on the x-ray film by hilar shadows, at times extending to the periphery of the lung.

Systemic venous congestion secondary to right heart failure is manifested by hepatomegaly, the liver edge extending more than 4cms below the costal margin. Tenderness is uncommon. Pitting edema and neck vein distention are not usually apparent.

Heart failure of sudden onset is uncommon in infants. It may result from an acute myocarditis, dysrhythmias or myocardial infarction.

"Spells" are seen most often in infants with tetralogy of Fallot. About 10% end in fatalities and an equal number are complicated by cerebrovascular accidents. "Spells" are characterized by sudden onset of dyspnea, irritability and a marked increase in degree of cyanosis. The infant becomes limp, may convulse and/or lose consciousness. Spells are associated with temporary disappearance of a pre-existing murmur, decreased arterial oxygen saturation and ST depression with increased p wave voltage in the electrocardiogram. Spells may be seen in very early infancy, becoming most common around nine months of age and decreasing in frequency after eighteen months. They often occur without warning but may be precipitated by crying, fever or hot weather. "Spells" should be treated by placing the infant in the knee-chest position, administering oxygen and morphine (0.2mg/Kg). Urgent referral for diagnosis and surgical relief are indicated.

The possibility of sudden death due to critical aortic or pulmonic stenosis should be considered in any infant with electrocardiographic evidence of left or right heart "strain" patterns. It behooves the generalist to recognize these patterns as his minimum requirement in pediatric electrocardiography.

Several types of cyanosis may be seen in infants. Peripheral cyanosis due to vasoconstriction is associated with cold, mottled extremities. Harlequin cyanosis has no clinical significance being common in normal infants during the first week of life and may be seen as late as 28 days. It is confined to one half of the body with strict midline demarcation. More commonly, it is manifested by pallor or redness but semicyanosis may be the presenting feature. Cyanosis due to pulmonary disturbances or right to left intracardiac shunting may be difficult to differentiate on clinical grounds if accompanied by respiratory distress. In the absence of respiratory distress the cause is most apt to be a right to left shunt. We believe that an anatomical diagnosis should be made in all cyanotic infants, but not necessarily on an emergency basis.

President's Page

Two subjects of vital interest to the Association deserve special mention this month. The first is malpractice, and hopefully by the time this appears in print, every member will have been informed in detail of the existence of a group basic malpractice policy for our members. One of Nebraska's major carriers has made a proposal which, if endorsed by the Insurance Committee and the Policy Committee, will be advantageous to all members. In addition to offering excellent basic coverage, options will exist for excess coverage, and the company has agreed to provide complete statistics on the resulting experience.

The other subject of concern at present is peer review. The emphasis put on this process by the federal government hardly needs reiterating here, except to say the concept is contained in all the national health proposals as well as new amendments for Medicare and Medicaid. In addition, all insurance carriers are stressing peer review particularly in regard to their "usual and customary" contracts. The American people are asking the medical profession for justification of the present health system, practice patterns, and costs, as well as assurance of quality care which is accessible to all.

At the direction of the House of Delegates in April 1971, and with the assistance of the several specialty organizations, the N.S.M.A. has set up a State Peer Review Committee. This puts our state organization in a leadership role to offer both the assurances and service being asked for. This 14-man committee bears a great responsibility for the entire medical profession in Nebraska. In order to meet this responsibility multiple district committees will likewise need to be organized and if success is to be attained all peer review groups must be fully informed and function in a coordinated manner.

Peer review is extremely complicated and functionally can not be separated from utilization review, cost control, and minimum standards of care. In addition, the various peer review committees will be asked to rule on problems with many different connotations from the various parties involved (government, private carriers, welfare, physicians, and patients). This will necessitate each of us, particularly the physicians, being fully informed about Medicare and Medicaid regulations, insurance policies, the role of consumer groups (including labor unions), etc. Admittedly, this puts a tremendous burden on each physician and even more of a load on the various committees, but I feel it is an absolute necessity if we are to meet our goal of meaningful peer review.

It should be rememberd that peer review, as being inaugurated in Nebraska, is educational and not punitive. The individual cases brought to peer review are just as apt to justify and support the physician as to support the governmental program or insurance carrier. We also expect to see relatively few individual cases but very profound problems of practice patterns.

The full mechanism for peer review in Nebraska should be operative soon. Peer review is a phrase that has been around for many years now, but I hope every physician will fully inform himself of all the facets of the process. I'm sure the state and district peer review committees will appreciate your interest and welcome your participation.

Roger Mason, M.D.
President, Nebraska State
Medical Association

WashingtoNotes

Drug abuse

The AMA supported President Nixon's legislation to create a special White House office to coordinate the federal government's fight against drug abuse "as an important element of the national campaign."

The AMA support was outlined by Dr. Maurice H. Seevers, chairman of the department of Pharmacology at the University of Michigan and a member of the AMA Committee on Alcoholism and Drug Dependence, before the House Public Health and Environment Subcommittee. He was accompanied by Dr. Richard E. Palmer, a member of the AMA Board of Trustees.

AMA on legislation

The American Medical Association set forth its recent record on legislation — a record that shows statements in support of health care proposals in 31 of 35 appearances in the 91st Congress and support in the present Congress for medical school expansion, increased financial aid to medical students, family practice training programs and full funding for maternal and child care programs.

The AMA's record on legislation was submitted as part of a 39-page statement filed by the organization with the Subcommittee on Administrative Practice and Procedure of the Senate Judiciary Committee. Subcommittee Chairman Sen. Edward M. Kennedy (D., Mass.), had charged the AMA with maintaining a negative and obstructionist attitude toward proposals to improve health care in the United States during a hearing by the subcommittee on July 14.

Bills supported by the AMA in the 91st Congress included appropriations for hospital and medical facilities construction, appropriations for medical education, drug abuse education and narcotic addict rehabilitation, vaccination assistance programs and regional medical programs.

The AMA opposed as unnecessary the proposed Commission on Marihuana; opposed one version of the Occupational Safety and Health Act of 1969 but supported another version in both the Senate and House; and opposed certain parts of the Social Security Amendments of 1970 while supporting other parts of the bill.

Two of the commission's own subcommittees had serious reservations about the legislation, the AMA stated, and it was only after AMA officials worked in close cooperation with Johnson Administration officials that the bill was salvaged with an emphasis on pilot projects to test the theories and concepts advanced by the commission.

The AMA completed its statement:

"Let us set aside old, worn-out charges. Let us set aside emotional language and political opportunism. Let us, instead, seek together valid and workable solutions to the health care problems that confront us.

"The AMA will support every such effort."

Doctors in service

Dr. Richard S. Wilbur, new assistant defense secretary for health and environment, proposed that the military services pay physicians substantially more to avoid a severe shortage of medical skills when the services switch to an all-volunteer basis in mid-1973.

Dr. Wilbur who succeeded Dr. Rousselot in the defense department's top medical post, is on leave of absence as the American Medical Association's deputy executive vice president.

At his confirmation hearing, Dr. Wilbur told the Senate Armed Services Committee that the health and environmental problems of the defense department cannot be entirely separated from the civilian population's. Among the major problems facing Dr. Wilbur in his new post are filling the armed services' needs for physicians, drug addiction in the services and whether there should be a military medical school.

He told Pentagon newsmen that he opposes establishment of such a school at this time. It has been a favorite project of Chairman Edward Hebert (D., La.), of the House Armed Services Committee and Dr. Rousselot. Dr. Wilbur said he was not enthusiastic about a military medical school because it would not begin producing enough doctors to be worthwhile for many years.

Dr. Wilbur predicted that the military will have "a severe health care shortage when the draft is gone" unless something is done about it.

Wilbur said the problem boiled down to money and that experienced doctors could make much more on the outside than they do in the military. There are currently 14,500 physicians and 6,000 dentists in the services.

Wilbur said the need was to induce doctors with eight or ten years service to stay in the military. At present, these men leave in large numbers and the services are forced to draft young doctors whom Wilbur described as "ineffective" because they lack experience. He said the services calculated that each brand new doctor putting in 24 months in uniform actually produced only 14 months of work.

A doctor with ten years in the service now gets $350 more a month than other officers of equal rank.

Down Memory Lane

1. There is no doubt in my mind that many metastases occur through the circulation brought about by too vigorous manipulation at the time of the examination or operation.

2. It is rare indeed that cancer develops in the cervix of a nulliparous woman.

3. The logical place for radium is not after but before the operation.

4. One of the most interesting and pleasant surprises of my stay in Great Britain was the celebration, even under war conditions, of the Christmas holidays.

5. In Nebraska the court upheld a doctor who warned a hotel keeper that one of his patients, a guest at the hotel, had syphilis and had refused treatment and was consequently a menace to the public health.

6. The American Society for the Control of Cancer has inaugurated a "Cancer Week" beginning October 30 and ending November 5 of this year.

7. A circular amputation of the breast was done leaving the wound open for additional Roentgen treatment.

8. The Arapahoe hospital was damaged by fire the last day of July.

9. An Alliance doctor was fined for violating the traffic rules by turning his car in the middle of the block, the quicker to reach a child in convulsions.

10. The darkest field in therapy, I think, is the gastro-intestinal tract. Yet, due to the efficiency of the x-ray in diagnosis, it is becoming a more hopeful field.

Nebraska State Medical Journal
September, 1921

Our Medical Schools

Physical therapy at U/N

Sixteen students have enrolled in the second class in the physical therapy program at the University of Nebraska Medical Center.

All are natives of Nebraska and have had at least two years of college elsewhere. Upon successful completion of the program the students will receive a bachelor of science degree.

Students in the Medical Center's first class of physical therapy are now on summer vacation. When they resume classes in the fall, 16 weeks of their final study will be devoted to a clinical clerkshop when they will be directly involved with patients in hospitals other than University.

Clinical experience for students

A pilot project to interest medical students in outstate Nebraska practice locations and at the same time provide the students with clinical experience has been initiated by students at the University of Nebraska Medical Center and Creighton University.

As a result, a presophomore student, Jim Freudenburg of West Point, Nebr., is spending the summer at the community hospital in Osmond, Nebr. He will be there 10 weeks working with physicians in the area both in their offices and in the hospital.

The program was originated by students. Steve Plettner, a Sutton, Nebr., junior, is directing the activities which also resulted in placing two Creighton students — one in Iowa and one in eastern Pennsylvania — in similar positions.

Plettner explained that the program is being nationally sponsored by the Student American Medical Association.

Each hospital or clinic interested in securing a student will be asked to develop a balanced program for 10 weeks which would include such activities as administration, hospital ward functions in medicine, surgery, emergency care, obstetrics and pediatrics, laboratory work, working with both general family physicians and specialists and a look at allied health fields and community health programs.

All activities in which the student would be involved would be supervised by appropriate personnel in the community.

Physicians, hospitals and communities interested in obtaining a medical student and developing a summer program may get more information by writing to:

SAMA-MECO Project
University of Nebraska Medical Center
42nd Street and Dewey Avenue
Omaha, Nebraska 68105

Continuing education at U of N

Twenty one courses for physicians are on the schedule of the continuing education department of the University of Nebraska Medical Center for the new academic year.

The schedule:

October	
8- 9	Vector and Computer Analysis of Electrocardiograms
15-16	Selected Endocrine and Metabolic Problems
30	Cornhusker Surgery Conference: "Pain"
November	
4- 5	The Mentally Retarded and the Multiple Handicapped: The Role of the Family Physician
19-20	Therapeutics for Ischemic Heart Disease
December	
6-10	Obstetrics-Gynecology Traineeship
January	
21	Utilization of Rehabilitation Services
February	
3- 4	Recent Advances in Genetics and Medicine
10-11	Facets of Some Common Neurological Symptoms and Treatment
March	
2	Common Urological Problems: Diagnosis and Treatment
6-11 and 13-18	Family Practice Review

23-24	Obstetrics and Gynecology
27-29	Cardiopulmonary Resuscitation
April	
6- 7	Pediatric Cardio-Respiratory Diseases
20-21	Advances in Hematology
27-28	Coronary Care Units in Community Hospitals
May	
1- 3	Rocky Mountain Bioengineering Symposium
8- 9	Symposium on Diabetes Research
11-12	Clinical Problems in the Practice of Medicine
18-19	Problems of Life and Death
25-26	17th Annual Surgery and Trauma Day

A course on vector and computer analysis of electrocardiograms will open the academic year for the University of Nebraska Medical Center's continuing education program. The course on October 8 and 9 will be held in University Hospital. The forty dollar registration fee includes two luncheons. The course carries nine hours of credit with the American Academy of Family Practice.

Selected endocrine and metabolic problems will be considered at Bryan Memorial Hospital in Lincoln October 15 and 16. Guest speakers include Dr. Ann Lawrence, associate professor of medicine at the University of Chicago, and Dr. R. Neal Schimke, associate professor of medicine and pediatrics at the University of Kansas Medical Center. Registration fee is $40 and the course carries nine hours of credit with the AAFP.

The Cornhusker Surgery Conference at Lincoln General Hospital will be devoted to pain. Speaker on October 30 will be Dr. J. Cuthbert Owens, surgeon from Denver, Colorado. There is no tuition for this course, which carries three hours of AAFP credit.

Coming Meetings

CRIPPLED CHILDREN'S CLINIC—
August 7 — Ord, Elks Lodge
August 14 — Scottsbluff, St. Mary's Hospital
August 28 — Cozad, Elks Lodge
Sept. 11 — Sidney, Elks Lodge
Sept. 25 — O'Neill, High School Building

CLINICAL ELECTROENCEPHALOGRAPHY — Sept. 13-15, 1971, Minneapolis. Write to: Dr. Donald W. Klass, Mayo Clinic, Rochester, Minnesota 55901.

AMERICAN ACADEMY OF OPHTHALMOLOGY & OTOLARYNGOLOGY — Annual Meeting at the Convention Center in Las Vegas, Nevada, September 20-24, 1971. For details, write to: C. M. Kos, M.D., 15 Second St. SW, Rochester, Minn. 55901.

SEVENTH NATIONAL CANCER CONFERENCE — Sponsored by the American Cancer Society and the National Cancer Institute; Biltmore Hotel, Los Angeles, California, September 27, 28 and 29, 1972. For further information write: Sidney L. Arje, M.D., Coordinator, Seventh National Cancer Conference, c/o American Cancer Society, 219 East 42nd Street, New York, New York 10017.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS — Annual Meeting of District VI (Wisconsin, Minnesota, Iowa, Illinois, Nebraska, South Dakota, North Dakota, Saskatchewan and Manitoba), Sept. 30 - Oct. 2, 1971. Write to C. Weir Horswill, M.D., University Hospitals, 1300 University Ave., Madison, Wis. 53706.

PEDIATRIC CARDIORESPIRATORY CARE — Houston, Texas, Sept. 30-Oct. 2, 1971; developed by American College of Chest Physicians and the Cystic Fibrosis Foundation. Write to: Department of Continuing Education, American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois 60611.

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY — Postgraduate Course, October 4 through 9, 1971 at the University of Illinois Hospital Eye and Ear Infirmary. Write to Department of Otolaryngology, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

RADIOLOGY — Continuing Education Conference — At the University of Iowa Health Center, Oct. 2 and 3, 1971. Write to Director of Continuing Education, Office of the Dean, University of Iowa, Iowa City, Iowa 52240.

OTOLARYNGOLOGY — Post graduate course; Sheraton Four Ambassadors Hotel, Miami, Florida, Oct. 8 and 9, 1971; presented by University of Miami School of Medicine. AAFB credit: 9 hours. Write to: F. W. Pullen, II, M.D., Neuro-Otologic Laboratory, School of Medicine, P.O. Box 875, Biscayne Annex, Miami, Florida 33152.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE — 22nd Annual Session; October 11-15, 1971; Americana Hotel, New York City. Address of AALAS is: 4 East Clinton St., P.O. Box 10, Joliet, Ill. 60434.

BRYAN DAYS — Oct. 15 and 16, 1971; Bryan Memorial Hospital, Lincoln, Nebraska. Write to: George E. Larson, M.D., Bryan Memorial Hospital.

BIOAVAILABILITY OF DRUGS CONFERENCE — Sponsored by the U.S. Pharmacpoeia and the Drug Research Board of the National Research Council, Oct. 18 and 19, 1971, in the new auditorium of the National Academy of Sciences, 2101 Constitution Ave. NW, Washington, D.C. Write to: U. S. Pharmacopeial Convention, 4630 Montgomery Ave., Bethesda, Md. 20014.

NEBRASKA STATE MEDICAL ASSOCIATION FALL MEETING — House of Delegates and Board of Councilors, October 22, 23 and 24, 1971, Holiday Inn, Kearney, Nebraska.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY — October 23 through 29, 1971; in U. of Illinois Eye and Ear Infirmary. Write to: Otolaryngology, P.O. Box 6998, Chicago, Illinois 60680.

ANTIBIOTICS AND INFECTION COURSE — Oct. 28, 29, 30, 1971. Write to: Ian Maclean Smith, M.D., University of Iowa Hospitals, Iowa City, Iowa 52240.

OMAHA MID-WEST CLINICAL SOCIETY —39th Annual Postgraduate Assembly; November 1, 2 and 3, 1971; Omaha Hilton Hotel. The Society's address is 1040 Medical Arts Bldg., Omaha 68102.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City. NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION — 25th Clinical Convention, New Orleans, Louisiana, November 28-December 1, 1971.

NEBRASKA STATE MEDICAL ASSOCIATION ANNUAL SESSION — April 30-May 3, 1972, Hotel Cornhusker, Lincoln, Nebraska.

NEBRASKA STATE MEDICAL ASSOCIATION ANNUAL SESSION — April 29-May 2, 1973.

Welcome New Members

Charles B. Jones, M.D.
Immanuel Hospital
Omaha, Nebraska 68111

George D. Maragos, M.D.
2602 "J" Street
Omaha, Nebraska 68107

Joseph S. Redding, M.D.
University of Nebraska Medical Center
Omaha, Nebraska 68105

Sam L. Watson, M.D.
5015 Dodge Street
Omaha, Nebraska 68132

Anthony J. Yonkers, M.D.
University of Nebraska Medical Center
Omaha, Nebraska 68105

It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precautions, and side effects.

The Journal assumes no responsibility for drugs and other products listed here.

New floatation pad

A new floatation pad, shown in laboratory tests to provide better weight distribution and lower cost care for bedridden and wheel chair patients, has been announced by 3M Company's Medical Products division.

Called Reston floatation pad, the nationally available addition to 3M's line of rehabilitation products can be used whenever care of the patient requires reduced pressure under bony prominences to help prevent and treat bed sores.

The new pad measures 16 by 16 by 1½ inches and weighs 11½ pounds. Constructed of a liquid-filled microcell sponge material, it is enclosed in cotton mesh and an elastic film. Two stretchable knit covers to allow for alternate laundering and a special carrying sling are supplied with each pad.

The pads do not support bacterial growth, can be cleaned with soap and water or alcohol and can be gas sterilized.

Reston floatation pads are available through 3M hospital supply dealers at $136.90. Further information is available from Box 3686, Medical Products Division, 3M Company, St. Paul, Minn. 55101.

Nebraska Regional Medical Program

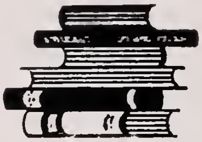
Typhoid-paratyphoid vaccine recently has been removed from the market. What immunization procedures does the patient go through?

Although the value of typhoid vaccine for active immunization against typhoid fever has been established, definitive information on the value of paratyphiod-A vaccine is not at hand and recent studies indicate that paratyphoid-B vaccine is valueless. The vaccine's apparent ineffectiveness and toxicity are such that its use is not warranted. The paratyphoid in the typhoid-paratyphoid vaccine did not have enough antigenicity of its own to warrant its use but it did increase the antigenic properties of the typhoid.

Thus, the adult patient requiring active immunization receives two doses of typhoid vaccine, each 0.5 cc. injected subcutaneously four or more weeks apart, or three doses at weekly intervals. Children six months to ten years receive two doses of 0.25 cc. injected subcutaneously four or more weeks apart or three doses at weekly intervals. This will constitute the immunization procedures against typhoid and paratyphoid instead of using the combination vaccine.

Paul E. Groth
Jorja Sturek

Books



Handbook of Psychiatry, edited by Philip Solomon, M.D. (University of California at San Diego), and Vernon Patch, M.D. (Harvard). Published 1971 by Lange Medical Publications, Los Altos, California, 2nd edition; 648 pages (5⅜″ by 8¼″), flexible cover; $7.50.

My surgery text has over 1500 pages, and my medicine is in the 17 hundreds, so a 648 page handbook is what we have come to, and this is good. There are sections on genetics, psychoanalysis, child psychiatry, college psychiatry, geriatric psychiatry, and forensic psychiatry. Insurance benefits are explained, and group therapy and psychiatric nursing are included. Drug dependence is described, there is a good section on mental subnormality, and there is a chapter on community psychiatry.

The book is written by 34 contributors, and is divided into 4 parts and further into 39 chapters. Each chapter is introduced by a short definitive and helpful paragraph. The references are good, the print makes for easy reading, and the use of boldface type is particularly effective. There is a very good chapter on statistics, and the editors have supplied a fine index.

The book is well written and all this for the cost of a good dinner.

—F.C.

Review of Medical Physiology, by William F. Ganong, M.D.; published June 1971 by Lange Medical Publications, Los Altos, California; 573 pages (7⅛″ by 10¼″); price $8.50.

Doctor Ganong is Chairman of the Department of Physiology at the University of California School of Medicine. "Review of Medical Physiology" was first published in 1963 and is now in its fifth edition; the preceding edition appeared in 1969. The book has been or is being translated into Portuguese, German, Italian, Spanish, Japanese, Polish, Greek, and Turkish. Each text page is divided into two columns, each index page into three. The index is good, the illustrations are many and well printed; and the use of boldface type, a feature of other Lange publications, makes reading easy and pleasant. There are eight sections and 40 chapters, an appendix, and good tables. I could not find a page without illustrations.

Five editions and nine languages are an adequate index of reader acceptance, and a new edition in only two years testifies to its up-to-dateness. References are given at the end of each section. The usual subjects are dealt with: nerve and muscle cells, the nervous system, endocrinology, metabolism, gastrointestinal function, circulation, respiration, and urine formation and excretion; and all their numerous subdivisions.

The cover is flexible, but seems durable enough. The text is well written, and seems comprehensive. It is a must for your library, and worth many times its price.

—F.C.

The Letter Box

To the Editor:

On November 4th and 5th, 1971, the Division of Preventive and Social Psychiatry at the Nebraska Psychiatric Institute of the University of Nebraska Medical Center is offering a course entitled "*Mental Retardation — The Role of the Family Physician.*" This course is being offered through the Continuing Education Division of the University of Nebraska Medical Center.

The course faculty for this two-day program has been drawn from professionals in all allied fields — who are deeply concerned for the mentally retarded in our state. Many of the faculty have been active in the development of treatment and training programs specifically designed for mentally retarded children and adults.

This course is specifically designed for the family-practice physician, in Nebraska, who has, in his practice, any mentally retarded individuals or their family members.

This two-day course will be a valuable informational resource to the family physician in bringing him up to date on the latest advances in the diagnosis, treatment, training and rehabilitation of mentally retarded persons. Members of the faculty will discuss, also, the key role which the family physician can play in helping to "shape" parental attitudes at the earliest stages — as these parents learn to cope effectively with the fact that they have a mentally retarded child.

Very truly yours,

Frank J. Menolascino, M.D.
Director,
Division of Preventive and
Social Psychiatry

To the Editor:

I would like to comment on your brief editorial entitled "The License" in the July issue of the Nebraska State Medical Journal, page 256. I do not know what prompted your comments regarding the matter of licensure but I must point out that the problem is much more complicated than simply providing relief for the physician who wishes to move from one state to another. Also, I would like to acquaint you with two of the steps that are now in progress or already accomplished that serve as a basis for a voluntary system of national licensing.

First, one must remember that the boards of medical examiners or the licensing boards in each state are delegated the responsibility of being sure that those licensed to practice medicine in that state are competent. Every avenue of investigation must be carried out on each applicant to be sure that his history of performance in another state has been satisfactory and that he is not a criminal, not an addict, not unethical, etc. Those boards are held responsible for being certain that the moral and ethical character of the candidate is of the highest order.

Second, we must be assured that the person presenting himself to the public is, in fact, an individual who has had the necessary educational background and the necessary minimum of experience prior to issuing a license. You would be amazed at the number of nonphysicians or inadequately trained physicians who attempt to obtain licensure in medicine and surgery in our various states.

Third, you must remember that the above investigation takes a certain minimum of time and it is very definitely in the public interest that sufficient time be allotted examining boards for the administrative functions necessary to make these investigations.

Fourth, there are already two mechanisms by which a single examination may soon be said to accomplish the fact of universal or uniform licensure within the United States:

1. The examination given by the National Board of Medical Examiners is now acceptable for endorsement by almost every state and is the usual route taken by physicians who have received their medical education in the United States.
2. The new licensing examination prepared by the Federation of State Medical Boards of the United States known as the FLEX exam. This examination is given twice a year to physicians who have received their medical education in the United States, but were unable to take National Boards for any reason, or those foreign medical graduates who meet the necessary requirements including a certificate from the Educational Council for Foreign Medical Graduates (ECFMG). This FLEX examination is given now in about 27 of the 50 states and is rapidly being accepted by all states. This is an attempt on the part of licensing boards to meet your suggestion of a national examining organization created by physicians rather than by the Federal Government. It is making excellent progress.

Fifth, we are fortunate in Nebraska that our licensing board was in the forefront of development of the FLEX examination and that this examination is added to and in part replaces the state licensing examination. For many years Nebraska has enjoyed reciprocal endorsement by almost every other state medical licensing body.

The above is only a glimpse of the progress that has been made in uniform licensing procedures in the United States and also gives only a superficial view of the complexity of the problems as it affects licensure in the United States.

Additional points that I have not touched on involve the matter of citizenship, the problem of trying to evaluate the educational competence of foreign medical graduates and the problem of American citizens who obtain their education elsewhere because they were not able to secure admission to a medical school in the United States or Canada. All of these things must be taken into consideration by licensing boards who have been given the serious responsibility of assessing and measuring the competence of an extremely wide variety of applicants from all parts of the world. It is not an easy job but I do believe that progress is being made and that once again the voluntary nongovernmental approach is worth working for although sometimes even the "leaners-to-the-right" would prefer to throw in the sponge and ask the Federal Government to take over. If we did so, I am sure that the limited red tape that we now have to endure would be multiplied manyfold. Let us try to be patient as long as definite progress is being made.

Sincerely,
Frank H. Tanner, M.D.
Member, Nebraska Board of
Examiners in Medicine and
Surgery
Lincoln, Nebraska

To the Editor:

The Staff of the Mayo Clinic and the Faculty of the Mayo Foundation are presenting Clinical Reviews this year in the fall. The dates are November 1, 2, 3 and again on November 8, 9, 10. Because of the large number attending in the past years, we are again presenting two identical sessions as we have done in the past.

Sincerely,
P. J. Osmundson, M.D.
Chairman, Clinical Reviews
Committee

Medicinews

Medical sciences lectures

The Nebraska State Medical Association, in cooperation with the AMA, is cosponsoring a program of seminars and a lecture in the medical sciences to be given at three universities in Nebraska during the 1971-72 academic year. The AMA Council on Foods and Nutrition initiated this program in the fall of 1964. It is being carried out on a regional basis with a total of 83 lectures being scheduled this year in the following 15 states: Arkansas, Colorado, Idaho, Iowa, Kansas, Kentucky, Minnesota, Montana, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, Wisconsin, and Wyoming.

The purpose of the lecture is to inform students and faculty of recent developments and to stimulate interest in the medical sciences. The lecturers will be on campus for the entire day to give undergraduate or graduate seminars and also to meet informally with students and faculty interested in

DR. DANIEL B. STONE

discussing careers in medicine and related fields.

Dr. Daniel B. Stone, Professor and Vice-Chairman of the Department of Internal Medicine at the University of Nebraska Medical Center will speak on "Heart Attack — You Can't Mean Me" at the following schools:

Kearney State College, Kearney
Wednesday, October 6, 1971

Nebraska Wesleyan University
Thursday, October 7, 1971

Wayne State College, Wayne
Wednesday, October 13, 1971

American Board of Family Practice

The American Board of Family Practice announces that it will give its next examination for certification in various centers throughout the United States. The examination will be over a two-day period on April 29-30, 1972. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

Deadline for receiving completed applications in the Board office is *February 1, 1972.*

Long-Term Results With Iodine 125 Treatment for Toxic Diffuse Goitre — S. C. Werner et al (Columbia Univ College of Physicians and Surgeons, New York 10025). Lancet 2:681-684 (Oct 3) 1970.

Two series of patients with toxic diffuse goitre were treated with iodine 125, one in New York City and the other in Amsterdam. Follow-up extends for over 54 months. Five of the six patients in the New York series have become hypothyroid, the sixth is persistently hyperthyroid. Mean dosage was 10 mc. In contrast, no patient in the Amsterdam series has become hypothyroid, and two remained persistently hyperthyroid. Comparable dosages of iodine 125 were given in the Amsterdam series. The range of effective half-lives and hence of calculated radiation doses to the thyroid was unusually wide in both series.

Application of Liver Scan to Diagnosis of Esophageal Varices — A. I. Rogers and J. S. Feiss (VA Hosp, 1201 NW 16th St, Miami, Fla 33125). Southern Med J 63: 950-953 (Aug) 1970.

Hepatic photoscanning with colloidal gold (^{198}Au) and conventional esophagoscopy were carried out in 49 patients with hepatic cirrhosis. A scoring method dependent upon the comparative degree to which radiocolloidal gold accumulated in liver, spleen, and marrow was applied to all scans, and score results were related to esophagoscopic evidence for or against esophgeal varices. Scans associated with a significant decrease in hepatic accumulation and increase in extrahepatic uptake of ^{198}Au were associated with esophageal varices 77% of the time. Overall agreement between the two procedures was noted in 59% of the patients studied.

Disappointments in the Management of Patients With Malignancy of the Pancreas, Duodenum, and Common Bile Duct — M. S. Beall, G. Dyer, and H. E. Stephenson, Jr. (Univ of Missouri School of Medicine, Columbia 65201). Arch Surg 101: 461-465 (Oct) 1970.

Only 8% of the patients with cancers of the pancreas, duodenum and common bile duct admitted over a 14-year period qualified as candidates for curative resection. To date, there is but one five-year survivor among 257 patients. Patients receiving palliative procedures survived longer than those without surgery, and pancreaticoduodenectomy generally afforded patients a longer survival than those undergoing palliative procedures. Among the patients with resectable lesions of the ampulla of Vater there were no postoperative deaths even though all but two were in the seventh decade. To date these patients represent survivals from 0 to 74 months.

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Physicians' Classified

Advertisements in this column are at a rate of ten cents per word with a minimum of $4.00 per insertion. Copy must be received by the fifth of the month preceding date of publication and should not exceed 50 words. Advertisements from members of the Nebraska State Medical Association will be accepted without charge for one issue. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

CLINIC AVAILABLE — General practice in furnished clinic. County seat town, SW Nebraska. 3 nursing homes in town, good territory. Write Box 8, Beaver City, Nebraska.

FOR SALE — Due to retirement, Picker X-ray, 200MA, new rotating anode tube, fluorescope, manual tilt table and dark room equipment $1,000.00. Also, sonar, Cambridge EKG, 5 microtherms, autoclave and microscope. Area code 308-235-2690, Kimball, Nebraska.

WANTED — Physician to complete 3 man general practice clinic. Modern hospital and two new nursing homes. Population increasing with development of pump irrigation farming. Good hunting and recreation area. Contact E. E. Yaw, M.D., or B. G. Shopp, M.D., Imperial, Nebraska 69033. Phone 308-882-4242.

TWO YOUNG M.D.'s — Are interested in establishing a Family Practice partnership in Nebraska. Must have approved hospital in community. Would consider established group or will start new practice. Contact Gary L. Conell, M.D. or Leland F. Lamberty, M.D., 4848 Sumner, Lincoln, Nebraska 68506.

GENERAL PRACTITIONER — Wanted for accredited State Hospital. Attractive salary — College Community. Living accommodations if desired. Regular hours. Full consultant staff. To fill positioned opened by retirement. Write Personnel, Hastings Regional Center, Ingleside, Nebraska.

CLINIC FOR LEASE — One story air-conditioned building, built in 1964, 26,236 square feet. Originally equipped as a 15-bed hospital containing laboratories, surgery, x-ray and food preparation facilities. Suited for institutional or commercial medical, veterinary or laboratory uses. 10 minutes from downtown Lincoln, ample parking. Contact: Lincoln Airport Authority, P. O. Box 80407, Lincoln, Nebraska 68501. (402) 435-2925.

OPPORTUNITY — For two G.P.'s to associate with well established G.P. in lucrative practice with idea of partnership leading to purchase. Eastern Nebraska. Excellent recreational, educational and open hospital facilities. Contact Box 29, Nebraska State Medical Journal, 1902 First National Bank Building, Lincoln, Nebraska 68508.

ORGANIZATIONS, STATE

Alcoholics Anonymous
Lincoln Center Bldg., Lincoln 68508

American Red Cross
1701 "E" St., Lincoln 68508

The Arthritis Foundation, Nebraska Chapter
Vernon G. Ward, M.D., President
302 Doctors Building, Omaha 68131

Cerebral Palsy Association of Nebraska
Mrs. Ben H. Cosdery
201 South Elmwood Road, Omaha 68132

Creighton University School of Medicine
Joseph Holthaus, M.D., Dean
2500 California, Omaha 68131

International College of Surgeons
Joseph J. Borghoff, M.D., Regent for Nebraska
7906 Dodge Street, Omaha 68114

Multiple Sclerosis Society
Mrs. Harold Stoehr, Executive Secretary
3648 Folsom Street, Lincoln 68522

Muscular Dystrophy Assn. of America
Robert Fitzgerald, District Director
6054 Ames Ave., Omaha 68104

National Cystic Fibrosis Research Foundation,
Nebraska Chapter
Mrs. Mona Boyd, Executive Secretary
636 Medical Arts Bldg., Omaha 68102

National Foundation, Inc.
Dick Rumbolz, 1620 "M" St., Lincoln 68508

Nebraska Association of Medical Assistants
Mrs. Barbara McMullen, President
4115 North 55th, Omaha 68104

Nebraska Association of Pathologists
Milton N. Stastny, M.D., Sec'y-Treas.
8303 Dodge, Omaha 68114

Nebraska Blue Cross - Blue Shield
Wm. H. Heavey, Executive Director
72nd and Mercy Road, Omaha 68124

Nebraska Chapter
American Academy of General Practice
William De Roin, M.D., Secy.
8258 Hascall St., Omaha 68124

Nebraska Chapter
American Academy of Pediatrics
H. E. Wallace, M.D., State Chairman
5145 "O" St., Lincoln 68510
James Wax, M.D., Sec'y-Treas.
118 So. 88th, Omaha 68114

Nebraska Chapter
American College of Physicians
Henry J. Lehnhoff, Jr., M.D., Governor for Nebr.
720 Doctors Building, Omaha 68131

Nebraska Chapter
American College of Surgeons
Dr. Carl W. Sasse, Jr.
8300 Dodge Street, Omaha 68114

Nebraska Dental Association
D. W. Edwards, D.D.S., Secy.
1220 Lincoln Benefit Life Bldg., Lincoln 68508

Nebraska Diabetes Association, Inc.
Mrs. E. H. Reitan, Executive Secy.
2305 South 10th St., Omaha 68108

Nebraska Dietetic Association
Marie Knickrehm, Ph.D., President
Univ. of Nebr., East Campus, Lincoln 68503

Nebraska Division American Cancer Society
Peter Zwier
4201 Dodge, Omaha 68131

Nebraska Epilepsy League, Inc.
Box 6412, Elmwood Station, Omaha 68106

Nebraska Heart Association
Mrs. Martha Robertson, Exec. Director
4155 Dewey Ave., Omaha 68105

Nebraska Hospital Association
Stuart Mount, Executive Director
1335 "H" Street, Lincoln 68508

Nebraska Nursing Home Association
Eugene J. Thompson, Executive Secretary
3100 "O" Street, Lincoln 68510

Nebr. Academy of Opthalmology & Otolaryngology
William Carter, M.D., Secretary
234 Doctors Building, Omaha 68131

Nebraska Pharmaceutical Association
Miss Cora Mae Briggs, Executive Secretary
1001 Anderson Building, Lincoln 68508

Nebraska Psychiatric Institute
602 South 44th Avenue, Omaha 68105

Nebraska Public Health Association
H. E. McConnell, Dr. P.H., President
State Health Dept., Lincoln 68509

Nebraska Rheumatism Association
Dr. Arthur Weaver, President
Lincoln, Nebraska

Nebraska Society for Crippled Children
4016 Farnam, Omaha 68131

Nebraska Society for Internal Medicine
John G. Brazer, M.D., President
5804 N.W. Radial, Omaha 68104

Nebraska Society of Anesthesiologists
Dean Watland, M.D., President
8601 W. Dodge Road, Omaha 68114

Nebraska Society of Medical Technologists
Marilyn Crane, President
4019 Nicholas, Omaha 68131

Nebraska State Department of Health
Henry Smith, M.D., Director
State Capitol Bldg., Lincoln 68509

Nebraska State Medical Association
Ken Neff, Executive Secretary
1902 First National Bank Bldg., Lincoln 68508

Nebraska State Nurses Association
Darlene Cording, Executive Director
307 Baird Bldg., Omaha 68102

Nebraska State Obstetric and Gynecology Society
Willis H. Taylor, Jr., M.D., Secretary-Treasurer
3610 Dodge Street, Omaha 68131

Nebraska State Orthopedic Society
Harold Horn, M.D., Secretary
3145 "O" Street, Lincoln 68510

Nebraska State Radiological Society
James P. Schlichtemier, M.D., Sec'y-Treasurer
8303 Dodge St., Omaha 68114

Nebraska, South Dakota, North Dakota District
Branch of the American Psychiatric Association
Harry C. Henderson, M.D., President
105 South 49th St., Omaha 68132

Nebraska Tuberculosis & Respiratory Disease Assn.
Delmer Serafy, Executive Secretary
406 W.O.W. Building, Omaha 68102

Nebraska Urological Association
Louis W. Gilbert, M.D., Sec'y-Treasurer
903 Sharp Building, Lincoln 68508

Nebraska Veterinary Medical Association
Bob Garey, Executive Secretary
Ninth and Minnesota, Hastings 68901

Omaha Mid-West Clinical Society
Mary E. Pilloud, Executive Secretary
1040 Medical Arts Building, Omaha 68102

POISON CONTROL CENTER
Children's Memorial Hospital
502 South 44th, Omaha 68105

Rehabilitation Service Division
Fred A. Novak, Assistant Commissioner
1701 So. 17th St., Lincoln 68502

University of Nebraska College of Medicine
Cecil L. Wittson, M.D., President
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Medicinews . . .

Radiology booklet

The Food and Drug Administration's Bureau of Radiological Health and the American College of Radiology have jointly produced and distributed to healing arts practitioners nearly a half million copies of a booklet designed to improve professional judgment in decisions to use diagnostic x-ray procedures and to increase patient and user protection.

About 300,000 physicians were on the booklet mailing list, in addition to medical students, podiatrists, veterinarians, and radiologic technologists.

The use of diagnostic x-ray procedures has been increasing, Dr. Edwards said, and may be associated with an increase in the dose to reproductive organs estimated to be received annually from x-ray exposure by the American people.

The booklet, "X-ray Examinations . . . A Guide to Good Practice," was prepared by members of the American College of Radiology Commission on Radiologic Units, Standards and Protection. It was published by the Bureau and distributed through the cooperation of the American Medical Association and other professional organizations.

Copies of "X-ray Examinations . . . A Guide to Good Practice" (Government Printing Office Stock No. 5505-0003) are available for purchase at 35 cents per copy from the Superintendent of Documents, Washington, D.C. 20402.

New UMKC Medical School

The School of Medicine at the University of Missouri - Kansas City opened its doors Monday, August 30, to "a new era of stressing care and compassion for patients," and welcomed its first classes totaling 93 students.

The students were admitted to an unusual six-year program, including 40 Year-1 students, most of whom were graduated from high school just last June.

THE NEBRASKA STATE MEDICAL JOURNAL

HOW CAN YOU TELL?

There are signs and there are symptoms. Manifestations of disease can be subjective or objective. In seeking truth, the physician is sometimes hampered by motivation. Does the patient want diagnosis or disability; is he after cure or compensation? Is he a hypochondriac or a malingerer, or is he sincere?

If he says he has ringing in the ears, how can you tell? If he says his back hurts, should you believe him? Nearly all disability claimers have the dumping syndrome after gastrectomy, but an incidence of only 10 percent is in the books. If the patient says his head hurts, you cannot feel his headache. He may complain of being unable to hear or to see well, or you may be told of seizures you could not see or of coma you did not witness; or of being unable to taste, which you cannot confirm. If he is tired, you do not share his fatigue.

The hypochondriac may welcome surgery, and the litigant demand restitution. But the physician must evaluate everything the patient tells him. Is he dealing with anxiety, with psychophysiology or conversion? How can he translate symptoms into signs?

My heart pounds, the patient may say, or I get short of breath; I get dizzy, but I don't fall.

Perhaps we do not discount motivation when we should, and our questions may be too leading. One patient had said nothing about hearing voices when he was not asked, and said nothing when we asked him. But when someone said "What do the voices say to you?" he said, "They tell me what to do." The one whose stomach has been removed may be well until someone suggests that he has dumping syndrome symptoms, whereupon, if that will help him, he gets them.

If he says his hands tingle, or it hurts to void, or his knee feels funny, you may believe him or not.

But how can you tell?

—F.C.

IF YOU HAD ONLY COME TO ME SOONER

An annual checkup may be a very good thing. We ask our patients to have them, and executives are required to submit to them. But we do not too often undergo checkups ourselves, and I have known people to die soon after being given a clean bill of health, whatever that means.

An annual check can eliminate cancer of the cervix, I have read, but I do not believe it. Proctoscopy (ugh), x-ray of the chest, electrocardiography, and GI series are surely worthwhile.

If you had a checkup every year, you might live longer than if you didn't. If you did it every six months, would you live still more? And is every month better yet? Actors have haircuts daily, I have read. Or is there a point of diminishing return?

You get more interest if the bank gives you 2% every six months than if you get 4% annually. And one percent every three months is still better. If they figure it by the second, it's wonderful. But if your interest is compounded every time interval made so small as to approach zero, you won't get rich. Your dollar can only come up to a value mathematicians call "e." It's less than 3, as a matter of fact.

Suppose you had a checkup every day. Would you live forever?

—F.C.

WHO'S A GOOD DOCTOR?

I have been asked, and you have too, I think, at cocktail parties, where they do not serve cocktails, thank God, "Who's a good doctor for me to see?" At this point, unless you say, if your tormentor is female, "Disrobe," you are no longer a friend, but you have almost surely established a patient-doctor relationship, since you are already diagnosing.

If a woman has a backache, an orthopod will very likely look for a disk, or a lumbosacral sprain or strain (I think they're the same thing), or a torn ligament, or myositis (whatever that is), or a muscle spasm. If you send her to a gynecologist, he is apt to look for, and therefore to diagnose, a fallen womb (they call it something else) or endometriosis. A psychiatrist will ascribe it to something else, and so will the urologist, and the surgeon will look for whatever he can take out.

I was once on a county society telephone committee, and a stranger would call in the middle of the night with a sore throat (one called me at 4 a.m. with just that, and said, "I knew you'd be up") and I would recommend a doctor. Was I to choose a friend, or someone I thought was skilled, or a board-certified colleague? At four in the morning, I was not about to suggest a friend. What right have we to decide who is good and who is not? I simply scanned the yellow pages and called out the third name on the list. And nondoctors, I think, can read telephone books, too. That's why doctors have their names there. In dining rooms and in groceries, I say "They're all good."

But if they are not equally good, have I discharged my responsibility, and may I evade it? Maybe, if I am asked, I must reply. An internist may know a surgeon he likes to work with. In group practice, captivity rears its head. And *elsewhere*, fee-splitting may have *long ago* decided who would do the operation.

I don't claim to have solved the problem. *Don't recommend* is sometimes the answer, but if the internist is in charge of your welfare, and you name a surgeon he does not think well of, *do recommend* may be better. Maybe the county committee was a good idea. And you can always go down the alphabet. Stop at "C."

—F.C.

HOWEVER

A computer can only count to two; that is why notation is taught in mathematics. A light goes on or it doesn't, a circuit opens or closes, and that is all. But computers work very fast. And above all, they *decide*.

Perhaps medicine is not a science, but it is more scientific than it was last year. And it has always been more of a science than an art, if there is a distinction.

I have been reading reports of physical examinations, and I have noticed that where the reports are very long, they tell you little; and when the reporter has nothing to say, he says it in big words.

When they are done for compensation purposes, reports are studded with what I can only call weasel-words, and the most wonderful of these is "minimal." Why do they call them *physical* examinations? Even mental examinations are called physical. When the examiner speaks of minimal changes in the lungs or of minimal evidence of arthritis, what does he *mean?*

Are the things he sees meaningful or are they insignificant? Does he find slight things that are of no importance? In one word, he giveth and he taketh away, and he leaves the reader and the referee to make a decision that he should have made himself.

But the very worst of the examiner's sins is his leading you down the primrose path with a series of signposts reading "negative" and "within normal limits," and then killing you on the last line of a three page report with the word "however." And at that point he completely reverses himself and says that everything he has told you before is untrue, and you begin to wish you had consulted a nice sane computer instead.

One that closes a circuit and keeps it closed, and makes a diagnosis.

—F.C.

WHAT PRICE MEDICAL CARE

In the United States, in 1970, this is what people spent.

On tobacco, alcoholic beverages, and recreation	59 billion dollars
On taxes	235 billion dollars
On medical care	27 billion dollars

If you like percentages, this is how we spent our money.

On housing and household operations	28.5 percent
On food	19 percent
On medical care	7 percent

It doesn't seem to make any difference, whether you measure it in dollars or in parts of dollars. We're just not up there with housing and household operations; or with tobacco and the rest; and not with food, either. And "medical care" means everything, including hospitals. That 7 percent didn't all go to the doctors, not half of it.

Why does food cost so much?

—F.C.

Studies in Myasthenia Gravis: Effects of Thymectomy — A. E. Papatestas et al (A. E. Kark, Mount Sinai School of Medicine, New York 10029). Amer J Med 50:465-474 (April) 1971.

One hundred and eleven patients with myasthenia gravis and 74 patients with thymomatous myasthenia gravis underwent thymectomy between 1941 and 1969. Fifty percent of the patients who achieved remission did so after a delay of two or more years. The time of onset of remission was directly related to the activity of the thymic germinal centers. In the nonthymoma patients remissions were stable and, with few exceptions, permanent. The percentage of patients in remission increased with each consecutive postoperative year, and 90% of patients with a five-year followup were in remission or had shown improvement. Sex, age and duration of symptoms had no marked influence on this trend. No death due to myasthenia occurred after the fourth postoperative year (excluding malignant thymomas); germinal centers were present in all the fatalities. These observations are consistent with the hypothesis that autoimmune diseases are due to abnormal clones of immunocompetent lymphocytes proliferating in the thymic germinal centers. In addition, thymectomy produces stable remission by eliminating these thymic centers, but its effect is delayed because of the long life span of the existing pool of small immunocompetent lymphocytes.

Surgical Treatment of Acute Necrotizing Pancreatitis — D. W. Lawson et al (Massachusetts General Hosp, Boston 02109). Ann Surg 172:605-617 (Oct) 1970.

A group of 15 patients with severe pancreatitis treated surgically is reported. Many of these patients had hypocalcemia and shock prior to operation. Except for two patients explored for diagnostic uncertainty, all patients either required endotracheal intubation for respiratory distress or pressors for blood pressure maintenance prior to surgical intervention. The operative program consisted of tube decompression of biliary and gastrointestinal systems by cholecystostomy, gastrostomy, and jejunostomy. Multiple intraperintoneal drains and sump drainage to peripancreatic and retroperiotoneal areas were placed. Mortality in this group was 26%. All four patients who died succumbed to late sepsis, and in the three examined by autopsy essentially complete pancreatic necrosis was found.

Psychiatric Indications or Psychiatric Justification of Therapeutic Abortion? — E. Pfeiffer (Duke Univ Medical Center, Durham, NC 27706). Arch Gen Psychiat 23:402-407 (Nov) 1970.

Under recently enacted abortion reform laws the total number of abortions and the proportion of abortions performed for psychiatric reasons have increased dramatically. It is possible and desirable to distinguish between "hard" and "soft" psychiatric indications, or between psychiatric indications and psychiatric justifications. Psychiatric indications exist when a psychiatrist should have been involved in the evaluation and treatment of the affected person. Psychiatric justification is being practiced when a psychiatrist is consulted only to justify the abortion before the law and the abortion is actually sought for socio-economic, hardship, or compelling personal reasons. Instances of psychiatric justification should be removed from the domain of psychiatry.

Splenectomy Through Pfannenstiel Incision

Report of a Case

R. I. WESTBROOK, M.D.*

THE author has been unable to find a similar case report after a thorough review of the literature. There have been numerous reports of accessory spleens and malposition of the spleen. However, this represented an unusual case and it was felt that it should be reported.

Case Report

This 24 year old white female was admitted to this hospital on July 13, 1970 with a history of a sudden, severe, low abdominal pain one week prior to admission. A pelvic mass was felt at the first examination; later, it was not palpable. Finally a mass was defined in the pelvis which seemed to be suprapubic and somewhat to the right of the uterus and quite tender. However, the pain had, by this time, subsided and all of the lab work obtained, including CBC, urine analysis, fasting and 2 hour postprandial blood sugar, BUN, flat plate of the abdomen, EPA of the chest were normal.

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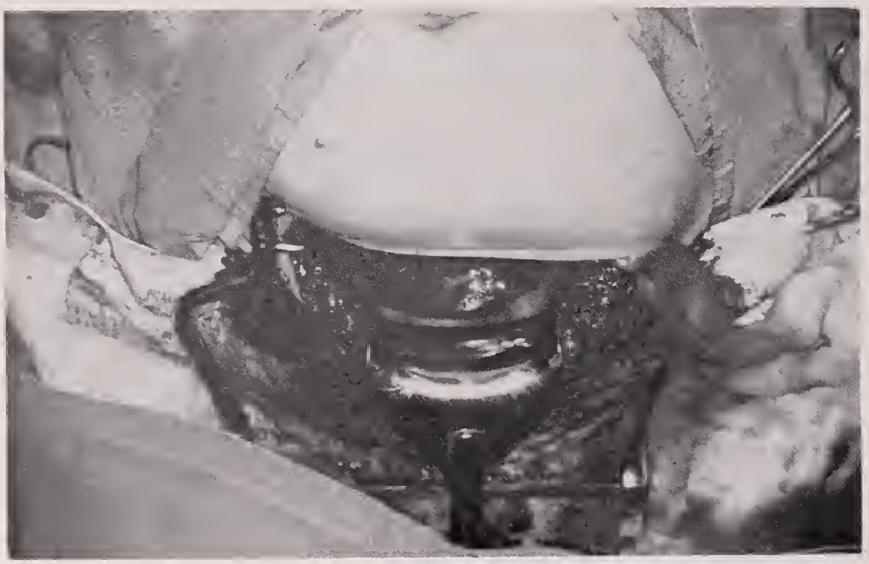
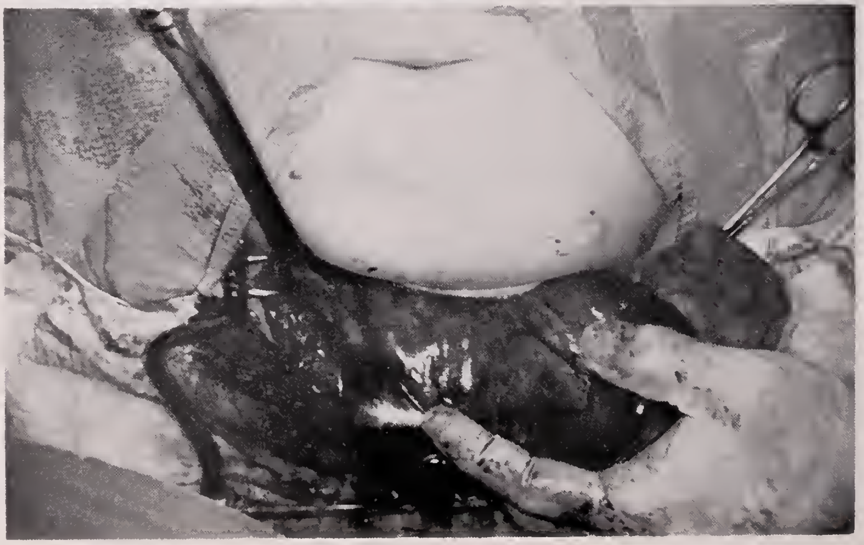
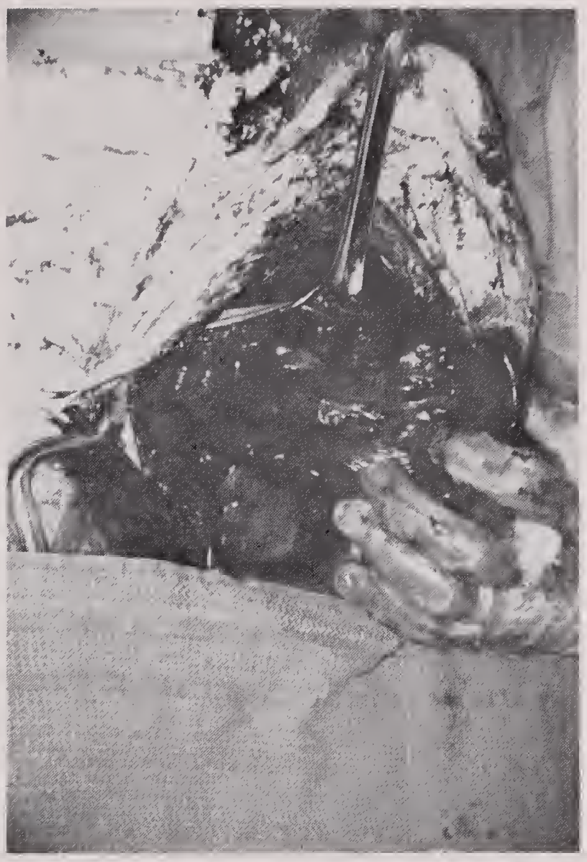
*Clinical Instructor, Department of Family Practice, University of Nebraska College of Medicine, Omaha, Nebraska.

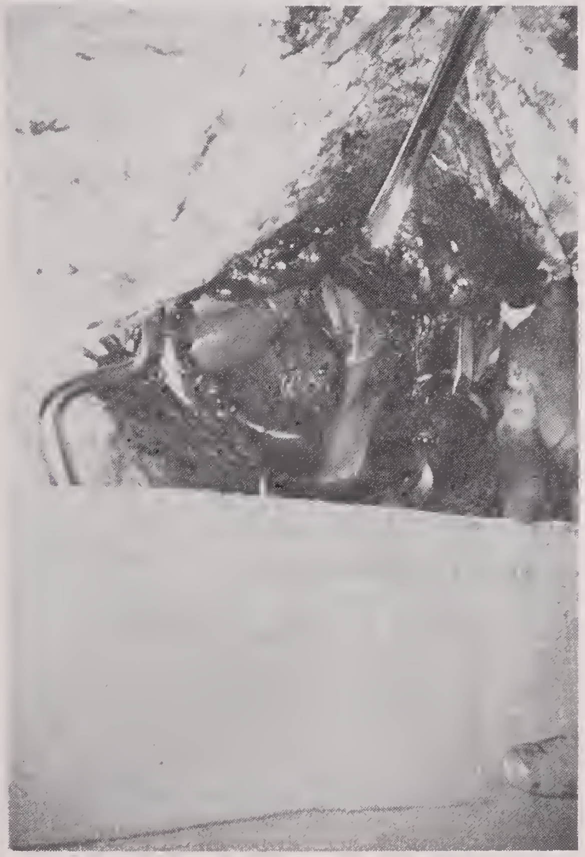




Examination upon her arrival here revealed a pelvic mass which was tender. Part of the laboratory work was repeated, CBC, UA and flat plate of the abdomen, and again was normal. The history otherwise was all noncontributory. She had no previous symptoms other than during her marriage (she has been divorced for approximately one year), she complained of rather severe dyspareunia and no reason was ever established for this.

The patient was then scheduled for pelvic laparotomy with a pre-operative diagnosis of twisted ovarian cyst. Pfannenstiel incision was used and thorough palpation of the abdominal contents revealed no abnormality other than the spleen, about one and a half times normal size, with its pedicle twisted and quite engorged, lying partially across the fundus of the uterus and posterior to the uterus, and the superior aspect of the spleen in the right superior adnexal region. (See photographs). The pedicle of the spleen had its origin in its normal position, as did the vessels; the pedicle was antecolic and there was no accessory spleen and no spleen in the left upper quadrant. The pedicle was then clamped, severed, and doubly ligated with 0 chromic suture ligatures, and routine closure performed. The patient had an entirely uneventful postoperative course and was discharged five days postoperatively, has been followed for three weeks, and has now returned to work.





Remarks

The author would appreciate any comments from the readers as to whether or not any similar experiences may have occurred since none could be found in the literature. It is presumed by the author that the dyspareunia was a direct result of this malpositioned spleen and the patient was quite fortunate not to have sustained a ruptured spleen during intercourse.

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Recent Developments in Laser Technology of Interest to the Practitioner

LEON GOLDMAN, M.D.*

IT is of considerable interest now for the practitioner to know more about some of the modern developments in laser technology. Many are familiar with the use of the laser in ophthalmology and current research in laser surgery. These will be discussed later. However, recent advances in laser technology should be of interest not only to those practitioners who are concerned with occupational medicine and the military but also to those interested in the world of today and tomorrow.

It is now ten years after the discovery of the laser. While some advances in applications are spectacular, outside of the military it is still having a difficult time. "The areas where lasers have attempted to make their initial inroads are some of the most conservative, tradition-bound sectors of American industry — medicine, metalworking, surveying." *(Electronic Products Magazine,* November 1, 1969, p. 120). The cardinal rule, not only in industry but in our research has been, "If you don't need the laser, don't use it." However, in the military, holography, communications, metal working, and computers and, recently in art, lasers are finally showing their specific merit.

The Lasers

The practitioner should be aware, especially since the high school physics student already knows that there are many lasers, not just one. They vary all the way from the ultraviolet far into the infrared. They are beams of light produced by stimulated emission of radiation. They may be pulsed, lasting only milliseconds to picoseconds, or they may be continuous (cw). Surgeons prefer the continuous beam (cw) lasers to use as a light knife. All are strong and precise. Their efficiency is low. For high-output systems, tremendous electrical energies are needed. For low-output systems, as in the new experimental laser cane for the blind, self-contained small battery units supply the power for the gallium arsenide lasers in the cane.

Additional recent developments, essentially for research instrumentation, are of interest since these instruments do not need such expensive setups. An example is the chemical laser, where the self-contained chemical reaction produces the stimulation for laser emission. Tunable lasers, that is, those developing any frequency desired from a single type of instrument, paper feasibility work on x-ray laser systems, and the role of the laser in thermo-nuclear fusion experiments are but a few of the current studies. The most significant is the thermonuclear fusion phase. This is done by providing very hot plasma needed to initiate such a reaction in deuterium. This brings the laser into the field of nuclear medicine. In this connection, much paper (and bench?) work is being done in the possibility of stimulating emission in the x-ray region of the spectrum to produce x-ray lasers. Such instruments, fortunately, are not available today. Although these would furnish third-dimensional x-ray pictures and details of the molecular structure of matter, their destructive powers would be beyond comprehension.

Safety

All are familiar with the Apollo 11 experiments, with the use of retroreflectors on the surface of the moon reflecting back Q-switched ruby (red) and pulsed argon (blue-green) laser beams. This is the area of communications and is of interest to the military as well as space programs. There is increasing concern among the public about the hazards of lasers in atmospheric propagation of these beams. The hazards concern eye damage. Patients may ask practitioners about this. How strong are these laser rays which go to the moon and are reflected back? In our current research with Q-switched ruby lasers for the treatment of tattoos, we are using Q-switched ruby, with energy densities 6 to 14 joules per sq. cm. Similar laser systems used to impact the retroreflectors on the moon, are approximately twice as strong as these. As these are projected high in the sky, they diffuse rapidly as they reach the moon. Then they are to be reflected back and are weak but strong enough to be detected only by special instruments. It is assumed that even for aircraft pilots who fly high, or their passengers, that the eye exposure to such laser beams is not excessive. A warning was issued recently to pilots in regard to the laser irradiation from the McDonald Observatory near Fort Davis, Texas. More work is being done in this phase because of the increasing uses of lasers for tracking, ranging, and even communications. Current experiments are being done in detailed safety programs at present. In brief, then, there are no hazards to the public at present. It is necessary to repeat, that in the use of any laser system, eye protection is most important. Detailed studies have been done on guidelines for safe exposures of the eyes and also of the skin.

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*Professor and Chairman, Department of Dermatology, University of Cincinnati College of Medicine; and Director, Medical Laser Laboratory of the Medical Center, University of Cincinnati.

Another current phase of the atmospheric propagation of laser systems is the new field of the laser as a visual art. This is being studied extensively for the first time at the Cincinnati Art Museum. Here, artists are working with the laser in design, etching, holography, interferometry (pictures of interference patterns by lightwaves), sculpture, and photography. Detailed testing has been done to assure the safety of such techniques, especially for the artist himself and for the general public. Tests by the Laser Laboratory, by the Bureau of Occupational Safety and Health of the U.S. Public Health Service, and the Cincinnati Health Department have established the safety of this for the viewing public. The toxicity of the thermal decomposition products in laser sculpture in plastics is also of concern.

Holography

A fascinating and important field of current laser technology at present is holography, third-dimensional imagery without the use of lenses or cameras. A picture of interference patterns, hologram, in film or glass, when viewed with proper illumination shows in space a third-dimensional image. Even multiple colors are possible. This hologram is produced by the marked coherency of the laser beam. Eye hazards are present in the development of the hologram and, when lasers are used for illumination, in the reproduction of this. However, there have been such advances in technique that often the laser is not used for the reproduction of these fascinating images in space, just ordinary light and, at times, ordinary polychromatic light sources. This technique of holography is being developed for signs in the air along highways, turnpikes, and in factories. Fascinating stress patterns may be shown in metals. In data recording, holography has made it possible to store "two and one-fourth million bits per square inch." It is believed possible to increase this to "six million bits per square inch." RCA has announced recently a color tape cartridge and cartridge player for a TV set to be available in 1972. A holographic image is put on a vinyl tape. Color reproduction is done through gratings superimposed on the hologram. A two-milliwatt helium laser reconstructs the hologram and a TV camera also in the playback unit attached to the television set picks up the laser reconstructed hologram. How this will all turn out in comparison with its rival, electronic video recording technique, remains to be seen. The special image reconstruction attachment of RCA will be enclosed so even though a low-output laser is used, there will be no hazard of laser radiation for the viewer. Also, modern color television sets are constructed now with minimal hazards of x-ray radiation exposure for the viewer and also for the TV service man.

Holography is used in our laboratory to study third-dimensional patterns of strains and stresses on bones. In biology, holographic microscopy is used to develop third-dimensional images of the growth patterns of the living cell. The laser attached to a microscope may be used for spectroscopy of living tissues, cells, and even intracellular components. This is done without complete destruction of the tissue or even the cell. For the future, the hospital laboratory will be able to do detailed analyses of calcium, phosphorous, iron, etc., from small drops of dried blood. The argon laser attached to a microscope now also can do microsurgery, even on selected areas of larger chromosomes. A whole new field of cellular biology is now being developed. Acoustical holography, a combination of ultrasound and laser holography, is being used to produce third dimensional pictures of the inside of solid objects. This is under study now for visualizations of bones and tumors.

Industrial Applications

Current developments in industry include also the use of the laser in metal work, welding, cutting, and drilling. Most of these are in closed systems, where the reflectant beam from the laser and where the metal plume particles from the laser reacting in metals present no hazards. However, if such metal drilling and working is done out in the open, those in industrial occupational medicine must be concerned with industrial hygiene of the hazards for the eye and skin, and for air pollution. Carbon dioxide lasers are now used for making dies, and for cutting wood and paper without charring. This laser is in the far infra-red 10600.0 mm., so this beam is invisible.

Other applications of the laser in industry at the present time include the helium-neon laser for measuring and for directional use for lining up pipe laying, tunneling, etc. Most of these lasers are not strong, but direct beam visualization should not be done. Weak infrared laser systems are under study in the automobile industry now as types of radar systems, warning systems for obstructions ahead or in back, etc. In any area of occupational medicine, detailed knowledge of the process must be acquired both by the doctor and by the industrial hygienist.

Another concern in laser safety of interest to the practitioner is the use of laser kits by the hobby crowd, often without adequate warning about the eye hazards. Some of these laser kits provide for fairly high output lasers, especially with the ruby laser systems. Complete lasers are now being advertised for purchase by the lay public. Some of these do not provide for adequate safety precautions. There is now legislation at the federal level, and in some areas at state levels, for detailed protection from lasers and for registration of lasers. On January 16, 1970, the Federal Radiation Control Act (PL 90-602) became effective. This new law concerns, in addition to lasers, x-rays, TVs, microwave, ovens, electron microscopes, vibrators, oscillators, etc. A special teaching course on laser safety, and laser applications in medicine is under CONMED of the College of Medicine and the Laser Laboratory of the Medical Center of the University of Cincinnati, scheduled for March 29, 30, 31 and April 1, 2, 3, 1971.

Medical Applications

Briefly, the current status in laser medicine of interest to the practitioner includes significant advances in laser surgery of the eye, now with the argon laser, and especially in laser treatment of progressive diabetic retinopathy and mainly in the juvenile diabetic. Such laser prevents extensive spread of the damaging neovascularization induced by hypoxia. There is now in production a new green-light laser photocoagulator for the eye. This is the frequency doubled yttrium aluminum garnet (YAG) laser, 530.0 nm. The argon laser may be more constant in its output and more flexible.

Laser surgery in man continues to be used for tattoos, especially with Q-switched laser systems. For the laser treatment of the resistant port wine birthmark lesions, children are now being treated under general anesthesia. Because of primitive quality of the current laser instrumentation, only small linear port wine spots can be treated in a practical fashion; the large ones require many treatments over long periods of time. Melanoma, rarely primary, continues to be treated by the laser. The serious prognosis of widespread metastases still remains, although the local lesion itself, accessible or made accessible to the laser beam, can be treated effectively. In man, local melanoma can be treated without the dissemination of melanoma foci from the impact area of the pulsed laser. Such local spread does occur in melanoma animal tumors. Multiple basal cell epitheliomas and the common brown seborrheic warty growths of the elderly continue to be treated with the laser. Laser epilation is also under investigation and pilot instruments are now available for clinical research. Laser transillumination is being studied for in the infant, for skull and angioma transillumination for the diagnosis of soft tissue tumors. For the diagnosis of cancer of the breast, laser transillumination is being compared to x-ray mammography and xerography. Laser colpomicroscopy is now under investigation in our laboratory for the research and development of instrumentation for more effective visualization and therapy of pre-invasive carcinoma of the cervix. Similar instrumentation is being developed for early cancer in other accessible areas such as the buccal cavity and larynx.

In our laboratory, laser cardiovascular surgery with the CO_2 laser has been done by Naprstek in dogs. This type of laser system has been used all the way from the thoracotomy, down to the inside of the heart, without other instruments, for control of bleeding. One phase of this work has been the production of a precise test model system for partial or complete heart block. Siler, Director of Laser Surgery, Hoefer, and Naprstek are doing extensive studies in CO_2 laser hepatic surgery of the dog to establish the parameters of such important surgery in man for trauma and for liver biopsy. This is of interest now because of the increasing frequency of liver damage from seat belt injuries from deceleration in automobile accidents. Similar studies are being done by Wangensteen and his associates at Minnesota. Here, studies are done also in experimental gastric surgery by Goodale. Hokeika, of the Division of Otolaryngology and Maxillofacial Surgery, has been using the laser for investigative larkngectomy and hypophysectomy in dogs. Similar studies have been done by Jako. Bone fusion by CO_2 laser and other lasers for bone grafting is under study by Miller of the Department of Orthopedics.

All these studies in our laboratory have been with the American Optical high output CO_2 laser developed by Polyanji. Basic studies on laser surgery and wound healing have been studied by Hishimto, also of our Laser Laboratory.

A detailed program of safety for laser surgery has been established by Altemeier, Siler, and Fidler in cooperation with the staff of the Laser Laboratory. The Laser Laboratory of the Medical Center of the University of Cincinnati has been the center of studies on laser safety and, with the U.S. Public Health Service, has initiated two international conferences on all phases of laser safety. A third conference to include also microwaves and ultraviolet light is planned in March 1971. This conference will include also safety programs for microwaves and ultraviolet irradiation. With planned programs, then, the laser is safe for the patient and the operator.

More effective instruments must be made available for use in biology and medicine. Such instruments are now available for military and industrial uses. More extensive applications of lasers for medicine must await the availability of these instruments and the development of laser biomedical centers. Consequently, laser advances in biology and medicine have suffered. Only by adequate advances in laser biology and medicine can effective safety programs be developed. So, again, the need for a special institute for medicine and biology is emphasized here with close and meaningful lines of communications, with the multiple disciplines of physics, engineering, instrumentation, biophysics, industrial hygiene, and medicine. This is necessary for future progress of planned safety programs and for the expected advances of the laser in biology and medicine.

The practitioner, then, must be informed and kept informed. He must be able to advise his patients, who are often disturbed by sensational headlines.

A Pilot Project in Rural Health Care

THEODORE H. KOEFOOT, JR., M.D.*
and
LOUIS W. BURGHER, M.D.†

A MODEL for the nation in improving health care in rural areas is being developed through a cooperative project of the University of Nebraska Medical Center and the community of Broken Bow. The goal is to make available to the community the diversified health services usually available only in large metropolitan areas, while at the same time providing medical, nursing, and allied health students part of the training in the environment of a self-sustained, smaller community.

The idea had its inception about seven years ago in an informal discussion of rural health care between Dr. Cecil Wittson, Chanceller of the University of Nebraska Medical Center, and one of the authors. The generosity of former Broken Bow resident Leo Melham and the interest of citizens in the community are making the idea work.

Rural health problems are often overlooked on the national scene, yet they are real and increasing. Thirty percent of the nation's population live in rural areas, yet are served by only 12 percent of the physicians, 18 percent of the nurses and even smaller percentages of allied health personnel. Perhaps the migration of medical personnel from non-urban areas can be reversed by establishing educational facilities in rural areas. This, in turn, would help to halt the federalization of medicine and to correct some of the inadequacies of distribution.

The primary goal stated in the University-Broken Bow agreement is to assure residents of the Broken Bow region the full range and quality of health service that would be available to residents of a metropolitan area containing a university medical center. Equally important is the aim of developing a center to assist in the training of physicians, nurses and technicians. The training is to be accomplished in a setting which might lead the new professionals to locate eventually in a rural area.

The formal agreement was signed June 4, 1971, by the Board of Regents of the University of Nebraska and the trustees of the Community Hospital, Inc., of Broken Bow. It outlines the Medical Center's intent to establish a model rural health care delivery system which would:

1. Develop a demonstration system for making health services more available and accessible in a representative rural area. The system would use the cooperative efforts of federal, state and local governments, the university, individual physicians and other private sectors of the community.

2. Re-educate health care providers and consumers toward more efficient use of the health resources available.

3. Provide quality health care at reduced cost through prevention, screening, early diagnosis and increased use of ambulatory care.

4. Give special attention to persons disadvantaged by disability, infirmity, poverty, old age, or youth.

5. Increase coordination and communication between the University and the rural community and intermediate health care centers.

The hospital trustees, who are completing construction of a new hospital and health care center, and the regents agreed to enter the joint venture to meet the two principal goals. The agreement stipulates that the program will be directed by a coordinating committee of four members, plus a chairman appointed by the chancellor of the Medical Center and approved by Community Hospital, Inc. The hospital and the chancellor each will appoint two committee members.

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The chancellor will be responsible for the medical training and educational aspects. This authority includes assigning and evaluating students participating in the program. The university will also make available some faculty members, who will have access to Community Hospital facilities. The hospital will provide classroom, laboratory, research, and teaching facilities to the trainees.

Community Hospital, Inc., has agreed to compensate the university for expenses of graduate physicians during their service in Broken Bow. The compensation will include salary, employers' Social Security taxes, vacation expense, and travel expense to and from Broken Bow. The university will cooperate with the hospital in obtaining grants, gifts and other funds for supporting the program.

Delivery of health care will be the full responsibility of local physicians and other ancillary personnel. The project will in no way interfere or conflict with the private practice of medicine. The university will be responsible for educational programs. Classes in all aspects of medicine will be conducted for area residents.

The Jennie M. Melham Memorial Hospital now under construction in Broken Bow will consist of a 52-bed hospital, a 70-bed nursing home, and a connecting clinic with offices for five physicians, three dentists, and consultants in dietetics, social work, and public health nursing. Laboratory and radiology departments in the hospital will serve both the hospital and the clinic building.

Plans are to connect Omaha and Broken Bow electronically. This will make immediate consultation and communication possible through television and medical computer.

The model health care system will also involve another of Nebraska's "firsts": The Nebraska Opportunity for Volunteers in Action (NOVA). Under President Richard M. Nixon's plan to bring existing volunteer organizations under the umbrella of one agency, University President D. B. Varner established the NOVA program. The federally financed NOVA is designed to provide volunteer service and educational experience in the community rather than in the more cloistered university. Today's medical student is aggressively concerned with his society and is eager to be out in the "real world" while adding to basic medical skills. The NOVA program offers the opportunity to temper the idealism of medical students with the realities of providing for the needs of the patient, whether medical, socio-economic or environmental. Rather than filling their minds with blueprints of the past, the students can become architects of the future.

The model rural health center will be one of about seven NOVA projects in the state. As such, it will serve as a prototype of what might be incorporated into medical school curricula throughout the nation. On an elective basis, medical students will be allowed to spend up to three months on a project and receive full academic credit.

Primary emphasis will be placed on programs in mental health, maternal and child care, family planning, mental retardation, care for the elderly, health education, and prevention of environmental pollution. Obviously, all these areas involve patient care, and most family doctors handle them as a matter of course. Until recently, however, educational policy has never allowed innovative programs to provide physicians-in-training with a deeper understanding and awareness that medical disaster is often a result of social disintegration.

In Broken Bow and in other such centers established from the model, the project will be under the direct supervision of a physician in the community. Such an individual is best qualified to determine the needs of the area and to demonstrate to the student what education is preparing him for. If medical, nursing, and allied health students, as well as graduate physicians, learn what can be done in a rural setting, some of them may be influenced to settle and work in the rural areas rather than remaining only in the cities. They must be shown that the release of human potential and broadening of cultural values is readily available in rural America.

Home Health Services

EMILY BRICKLEY, R.N., B.S.*

THE 1965 Amendments to the Social Security Act established a comprehensive program of health insurance for the aged (Medicare). Reimbursement for home health services rendered under the auspices of organized home health agencies is one of the covered benefits. The program helps meet the cost of part-time or intermittent nursing care and related services furnished by visiting nurse agencies, hospital-based home health programs, and similar agencies. This benefit provides an important and less costly alternative to institutionalization, whether in a hospital or extended-care facility, for persons who require medical care but could be taken care of at home. Home health services are offered under both the hospital insurance and supplementary medical insurance part of the program.

The passage of Medicare has given impetus to the creation of new and the expansion of existing community home health programs; for among those health services to the elderly for which the federal insurance program will provide reimbursement on a reasonable cost basis are qualified home health services. But prior to an agency's participation in the federal program, it is necessary that the agency providing the service be certified for participation in the Hospital Insurance Program. Home Health Agencies, like participating hospitals and extended care facilities, must comply with the conditions of participation prescribed for such agencies. These conditions are outlined in a thirty page booklet published by the Social Security Administration.

To receive certification as a provider of home health services under the Health Insurance Program, an agency must adhere to the following policies:

1. It must qualify as a non-profit organization and present proof of its exemption from the Federal income tax pursuant to Section 501 of the Internal Revenue Code, 1954 (Where State Law exists for the licensure of proprietary organizations extending home health services, these organizations can be certified; however Nebraska possesses no such licensure program and, thus, proprietary agencies can not be certified for participation).
2. It must possess as an integral part of its administrative framework an Advisory Council, consisting of at least one physician and one registered professional nurse, to regularly and frequently review and evaluate all agency policies and procedures.
3. It must designate either a physician or a registered professional nurse to directly supervise the agency's performance in providing home health services.
4. It must be the primary function of the home health agency to provide skilled nursing and other therapeutic services on a visiting basis in a place of residence used as the individual's home.
5. It must provide at least two therapeutic services, one of which must be skilled professional nursing. The second service could be either of the following: physical, speech, or occupational therapy, medical social services, or home health aide services.

The responsibility for the Medicare Program is vested in the State Health Department. The interpretation, promotion and consultative services in establishing agencies is logically assigned to the State Health Department's Division of Public Health Nursing, since nursing is the basic service in a home health agency. Certification, application and review is the responsibility of the Division of Standards. In order to function an agency must be in substantial compliance with the Conditions of Participation.

A patient is entitled to 100 home visits, provided it is determined that he is in need of skilled care in the home and there must be a plan of treatment. The agency is organized, staffed, and equipped to provide services to homebound patients on a part-time or intermittent basis.

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There must be an advisory group of professional personnel. It is desirable for the group to include lay persons knowledgeable in health affairs and also a wide range of professional representatives, such as medical social worker; nutritionist; speech, physical, and occupational therapists.

The Home Health Agency designates a physician or registered professional nurse to supervise the agency's performances in providing home health services in accordance with the orders of the physician responsible for the care of the patient and under a plan of treatment established by such physician.

The agency must have written policies concerning qualifications, responsibilities and conditions of employment for each type of personnel. They must also maintain adequate clinical records and systematic periodic evaluation of their programs.

There are in the neighborhood of 2300 Home Health Agencies in the United States. All agencies have run into some difficulty, particularly in the area of reimbursement from the Health Insurance Benefit Program. It is necessary to have very accurately documented records in that the program is designed to deliver skilled and not custodial care.

There is a new organization, The National Organization of Home Health Agencies, formed in October 1970. Its purpose is to foster high standards of patient care in home health services; to initiate, sponsor, and promote educational programs and research; to provide for the exchange of information with those interested in home health services and total health care; to interpret home health service to governmental bodies affecting the delivery and financing of home health services; to provide an organized and unified voice for home health agencies; to promote methods of financing of home health services; to provide consultation and disseminate information to member agencies; to encourage cooperation with existing organizations at national, state and local levels, and to acquaint the public with the functions and availability of home health services.

Nebraska has five Home Health Agencies, namely,

Omaha-Douglas County Health Department, Omaha

Tabitha Home Health Care, Lincoln

West Nebraska General Hospital, Scottsbluff

Mennonite Deaconess Home and Hospital, Beatrice

St. Francis Home Health Services, Grand Island

Each of these agencies found it necessary to be subsidized in the beginning and in some instances continued in order to have an ongoing program. Home health agency services are not limited to the elderly or Medicare recipients.

More detailed information is available from the State Health Department.

General Highlights of Cardiac Auscultation*

JOSEPH K. PERLOFF†

THE practical use of cardiac auscultation requires an understanding of certain elementary principles. First, auscultatory events must be *heard* before they can be interpreted; accordingly, the technicalities and techniques of auscultation are paramount. Second, recognition of the various heart sounds, especially the first and second sounds, defines systole and diastole and establishes the timing of the different phases of the cardiac cycle. Third, the timing of murmurs can readily be accomplished once the phases of the cardiac cycle are defined. The following remarks will touch on each of these three principles.

Technicalities and Techniques

The chain of success in this area consists of a number of links. The *instrument* of auscultation is the stethoscope that was introduced by Laennec in 1819. The ideal stethoscope is yet to be devised but good instruments are available and certain guidelines are useful in their selection. Both a bell and a diaphragm are necessary, the former for the low frequency ranges and the latter for the high. Connecting tubing should be relatively firm and single; double tubes are acoustically less efficient and cause extraneous noise when they touch or rub together. The overall length of the entire stethoscope should be about 22 inches. The binaural ear pieces should be relatively large so that they occlude the external auditory canals and do not uncomfortably enter them. Finally, all connections must be airtight in order to avoid loss of sound by leakage.

The next link in the chain is the sensing device, i.e. the human ear which can be trained to sense the broad range of frequencies eminating from the heart and blood vessels. It is encouraging to know that the ear is more efficient than the phonocardiogram in recognizing high frequencies such as the soft murmur of aortic incompetence. The ears are all important since even the best stethoscopes do *not* amplify sound but merely transmit it to the ears with relatively little loss. Perhaps the most important link in the chain is the interval between the stethoscope ear pieces, namely, the human brain. The brain interprets what is heard, and in order to do so effectively it must be programmed by years of experience. Once these technical links — the instrument, the sensing device, the interpreter and the programming — are forged, we can turn attention to the ascultatory technique itself.

Auscultation should be conducted in a quiet examining room that is free of ambient noise and that has a temperature so regulated as to avoid shivering. The patient must be relaxed and comfortable and the examiner unhurried. Various postures should be employed such as supine, prone, left lateral decubitus, sitting, leaning forward, standing, or squatting. Respiratory patterns should also be appropriately selected including quiet or arrested breathing for routine auscultation, full held expiration for the soft murmur of aortic incompetence, or normal or exaggerated respiratory excursions for the behaviour of the second heart sound or for certain right-sided events. Physical and pharmacologic interventions are useful and include coughing, effort, squatting, isometric tension (squeezing the clinched fists), and certain vasoactive drugs especially amyl nitrite and pressor agents. When the bell of the stethoscope is applied with varying degrees of pressure, a relatively broad range of frequencies can be elicited. When the bell is touched lightly to the skin, low frequencies are heard (soft third heart sound); when high frequencies are paramount, firm pressure with the diaphragm is required. Palpation should precede auscultation so that the stethoscope can be placed precisely at the most appropriate precordial sites. Finally, auscultation should not be confined to the precordium but should include the right chest, axillae, back, neck, flanks, abdomen, groins, and at times the eyeballs and skull.

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*Prepared by the American Heart Association for this Journal.

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The Heart Sounds

The normal heart sounds define the phases of the cardiac cycle and serve as standards by which abnormal heart sounds can be judged. The first heart sound is best assessed at the apex or lower left sternal edge and is either single or closely split. Splitting is usually confined to the lower sternal edge and is normally not heard at the base. Although analysis of the first heart sound provides helpful information, analysis of the *second* heart sound is far more useful and has been called the key to auscultation of the heart. Proper interpretation of the second sound assumes an awareness of its location, splitting, and intensity. In the second left intercostal space there are two components, aortic and pumonic, which are synchronous (or nearly so) during expiration and split during inspiration. A judgment regarding the intensity of pulmonary valve closure requires comparison with aortic closure when *both* sounds are heard simultaneously during inspiration. The comparative softness of the pulmonary closure sound is held responsible for its localization in the vicinity of the second left intercostal space, and the relative loudness of aortic closure accounts for its audibility at all areas. It should clearly be stated that A_2 refers to *arotic* valve closure and P_2 to *pulmonary* valve closure. A_2 and P_2 do *not* refer to the second heart sound in the "aortic" vs. the "pulmonary" area; such use implies a complete misunderstanding of the origin of the two components of the second sound. Similarly, P_2 by definition is a single sound caused by pulmonary valve closure, so the expression "split P_2" is a misnomer that should be abandoned.

The third and fourth heart sounds are best understood in relation to the two diastolic phases of ventricular filling. These sounds originate *within* the recipient ventricle, the third sound during the middiastolic filling phase and the fourth sound during the presystolic filling phase. Accordingly, a fourth heart sound implies sinus rhythm. Both sounds are low frequency events that are most readily heard with a light touch of the stethoscopic bell.

The foregoing heart sounds — first, second, third, and fourth — can either be normal or abnormal. The *following* sounds are, for all practical purposes abnormal events.

Opening snaps characteristically originate in the mitral valve usually because of stenosis. The snap is relatively high frequency, is heard not only at the apex but also at the sternal edge and base, and is best elicited with the stethoscopic diaphragm or firm pressure with the bell. Since the mitral valve must open before the ventricle can fill, the timing of the opening snap necessarily precedes the timing of the third heart sound.

Ejection sounds are high pitched, clicking early systolic events that originate in either the left heart (aortic valve or dilated ascending aorta) or right heart (pulmonic valve or dilated pulmonary trunk). These sounds tend to be heard at the *base* of the heart and should not be mistaken for split first heart sounds. The aortic ejection sound is well-heard at both the base and apex and with rare exception does not vary with respiration; the pulmonic ejection sound is well-heard in the second left intercostal space and often varies characteristically with respiration, getting selectively softer with inspiration and louder with expiration.

Systolic clicks must be distinguished from ejection sounds. The clicks are similar to ejection sounds in frequency but not in timing or chest wall location. Clicks generally originate in redundant mitral chordae tendineae; they are single or multiple, maximal at the apex, and begin in mid to late systole.

Cardiac Murmurs

A cardiovascular murmur is a relatively prolonged series of auditory vibrations characterized according to intensity (loudness), frequency (pitch), configuration (shape), quality, duration, direction of radiation and timing in the cardiac cycle. The timing of murmurs is particularly important since it serves as a basis for classification. Systolic murmurs are classified according to their time of onset and termination as midsystolic, holosystolic, early systolic, or late systolic. A midsystolic murmur begins after the first heart sound and ends before the second sound (aortic stenosis). A holosystolic murmur begins with the first heart sound, occupies all of systole, and ends with the second heart sound (classic mitral incompetence). Early systolic murmurs begin with the first heart sound, diminish in a decrescendo fashion, and end at or before midsystole (very small ventricular septal defect with early systolic shunt). Late systolic murmurs begin in mid to late systole and end with the second heart sound (mitral incompetence with late systolic regurgitation). Finally, *extracardiac systolic arterial murmurs* originate in either systemic or pulmonary arteries. The existence of such murmurs emphasizes the importance of careful auscultation at nonprecordial sites.

Diastolic murmurs are classified according to their time of *onset* as early diastolic, middiastolic, or late diastolic (presystolic). An early diastolic murmur begins with the second heart sound (aortic incompetence). A middiastolic murmur begins at a clear interval after the second heart sound (mitral stenosis with atrial fibrillation). A late diastolic murmur or presystolic murmur begins in the period immediately before the first heart sound (mitral stenosis with sinus rhythm).

The term "continuous" is best applied to murmurs that begin in systole and continue without interruption through the time of the second heart sound into all or part of diastole. Persistence of murmurs throughout the cardiac cycle is therefore not a requirement. Accordingly, a murmur that proceeds into diastole without stopping at the second heart sound is considered continuous whether or not it finishes before the next first heart sound. Continuous murmurs can be due to aortopulmonary communications (patent ductus), arteriovenous connections (systemic arteriovenous fistulas), or can be purely arterial (arterial constriction), or purely venous (venous hum).

Summary

There are few areas of clinical cardiology that auscultation does not animate. This paper has reviewed three areas relevant to this topic: (1) the technicalities and techniques of auscultation, (2) the heart sounds, and (3) cardiovascular murmurs. Skill in auscultation remains a hallmark of the good clinician and it is understandable why this is so.

President's Page

Each member of the N.S.M.A. has received a personal announcement of the inauguration of a group basic malpractice program through the St. Paul Insurance Company. This culminates 2½ years of effort by our insurance committee and merits the participation of all Nebraska physicians. Some details of the program deserve discussion.

Our policy committee agrees with the insurance committee that the St. Paul Insurance Company is an excellent choice of a carrier. This is one of the major carriers in the United States, and these people have considerable experience in both group and individual coverage. The St. Paul Insurance Company has administered 10 group programs in the United States, but this is the first new group added in 10 years. In addition, 30% of our members are now insured by this company.

Though considerable personal contact as well as committee action went into securing a group program for Nebraska, two factors were of prime importance in the company's decision; the success of our legislative program in 1971, and the inauguration of an effective peer review program. Without these two factors, I am sure we would still be looking for a carrier to endorse.

There will be no reduction in premiums for this coverage initially, but we have received assurance there will be no premium increase for the next 12 months. Furthermore, any premium adjustment, up or down, will be justified to the N.S.M.A. insurance committee. The St. Paul Insurance Company has also agreed to provide our state association with all statistics affecting the rate structure on a monthly basis. These statistics will include such things as premium income, administrative costs, out-of-court settlements, judgments, investigative costs, etc.

The St. Paul Insurance Company has also agreed to help our association conduct an adequate malpractice prevention program, and to assist us in promotion of our legislative program as it pertains to malpractice. This should help us create a more favorable litigation climate in Nebraska.

A few words about participation are also important, I feel, since the N.S.M.A insurance committee will play a role in issuance of coverage. Under this program, the carrier will inform the insurance committee of any individual to whom they would deny coverage. If the committee believes there are extenuating circumstances, a complete reevaluation of the case will be undertaken. If however, the committee agrees with the carrier, coverage under the group program will be denied. This does not preclude the committee from helping such an individual obtain other malpractice insurance, but it will help ensure our group has the best possible experience statistics. This in turn will mean our members will enjoy the best coverage at the least justifiable cost.

Some points about the program are important from the standpoint that they are omitted from the agreement. For instance, the N.S.M.A. did not agree to participation of any certain percentage of our membership as was true for some other state-wide programs. Also, no individual member is required to switch companies.

I think the N.S.M.A. can sponsor this malpractice program with both pride and effectiveness. I urge every member to discuss this policy with his nearest St. Paul agent. I would also urge you to discuss some of the malpractice-related coverage available.

Roger Mason, M.D., President,
Nebraska State Medical Assn.

WashingtoNotes

1. The President's proposals

President Nixon's sweeping economic proposals have pushed aside chances for Congressional hearings on national health insurance until after the first of the year. Four of the Nixon economic proposals require legislative action and this will keep the House Ways and Means Committee busy at least through September and probably longer. Coupled with the Congress' announced intention on adjourning in late October or early November, this could delay congressional action on national health insurance until late 1972, or possibly until the convening of a new congress in 1973.

While the House Ways and Means Committee considers the Nixon economic proposals the Senate Finance Committee will consider the Social Security Amendments (H.R. 1) already passed by the House. Chances are that the Senate will delete the Administration's welfare proposals (Family Assistance Plan) from H.R. 1 and add Senator Wallace F. Bennett's (R., Utah) Professional Standards Review Organization proposal of last year. Enactment of this legislation prior to adjournment is considered likely.

Also considered likely to be enacted prior to adjournment are the health manpower bills presently in conference. This legislation would authorize an established $3.3 billion in aid to health profession students and their schools in the next three years and provide facilities and programs to close the manpower shortages in the health professions within seven years.

2. HEW & malpractice

A Health, Education and Welfare Commission has been formed to study the entire range of medical malpractice problems. The commission will conduct a series of public hearings on the fundamental causes behind the rising number of malpractice claims and their effects on the health care system, the legal system, the insurance industry, and the general public.

Headed by Attorney Wendell Freeland of Pittsburgh, Pennsylvania, the newly created secretary's Commission on Medical Malpractice will represent health care providers and institutions, the legal profession, the insurance industry and the general public. Acting as additional consultants to the commission will be advisory panels comprised of experts in the disciplines directly concerned. The commission will make a final report with recommendations to the HEW Secretary.

3. Health department: cabinet?

The AMA's often expressed desire to see the establishment of a separate Department of Health with cabinet status has again been brought to the public's attention with the announcement of Congressman Paul G. Rogers (D., Fla.), chairman of the House's subcommittee on health, that he will shortly introduce such a measure.

The issue seems to turn on the intertwined questions of which committees in Congress have the job of enacting and overseeing a national program and how the federal government will administer it.

During the past 10 years or so health has mushroomed as an economic force in American life, and as a function of government. Neither congress nor the executive branch has been able to keep pace organizationally with the changes.

Congressman Rogers' call for a separate health department is considered to be part and parcel of this behind-the-scenes jockeying by the Congress for more authority in health care matters. If a Department of Health was established, Rogers' subcommittee could claim authority over all of the activities of the new department and drive to establish a permanent full committee on health.

However, Rogers' proposal runs head-on against current thinking in the administration where policy has jelled in support of the current trifunction HEW apparatus. The trend of administration thought is that fewer departments make for more efficiency and coordination, less bureaucracy.

4. National health insurance

A comprehensive actuarial study of all of the major proposals for national health insurance arrangements prepared by HEW has been released for the information of congressional committees studying the issue.

The actuarial report's prediction of gross underfinancing in the Kennedy proposal for federal assumption of the bulk of health care costs was the most noteworthy item in the 83-page report. The work was reviewed by outside experts to check on its fairness and soundness.

The major plans before congress would compare in terms of additional costs to the government as follows:

Administration — $2.6 billion

Kennedy — $59.4 billion

Medicredit (backed by the AMA) — $6.3 billion

Burleson (the health insurance industry plan) — $7.3 billion

Javits (medicare for all) — $41.6 billion

Hall-Long (catastrophic only) — $3.2 billion, $3.1 billion

Pell-Mondale (mandated employer plans, health care corporations) — $4.9 billion

For the most part, these costs represent "transferred" spending from the private sector to the federal sector. In the case of Medicredit, financed largely by tax credits for purchase of comprehensive private insurance, most of the "cost" represents a revenue loss rather than an additional expense.

The HEW report said overall federal spending under the Kennedy bill, including existing programs it would take over, would total $81.6 billion in the fiscal year 1974, but that the proposed financing would raise only $57 billion. Thus, it would be underfinanced by 43 percent, or $24.6 billion.

National health expenditures of all kinds will raise to $105.4 billion in fiscal 1974, an average increase of 12 percent a year, if none of the major proposals is enacted. Operation of the Kennedy program in fiscal 1974 would result in total U.S. health spending (government and private) of $113.8 billion; the administration bill, $107.2 billion; the insurance industry bill, $110 billion; and Medicredit, $109.5 billion.

Effect of Prolonged Bed Rest on Renal Diluting Capacity in Normal Man — M. Epstein (USAF School of Aerospace Medicine, Brooks Air Force Base, Tex 78235). J Appl Physiol 30:366-369 (March) 1971.

The effects of two weeks of absolute bed rest on renal diluting capacity were studied in eight normal young men. An acute sustained oral water load of 20 ml/kg was administered during a control period of normal activity, on the 13th day of absolute bed rest and on the fourth or 14th day of postbed-rest recovery. Bed rest did not significantly alter peak urine flow corrected for glomerular filtration rate (urine flow/glomeruler filtration rate), ability to generate free water, or ability to achieve minimal urine osmolality.

Tay-Sachs Disease: Prenatal Diagnosis — J. S. O'Brien et al (School of Medicine, Univ of California at San Diego, La Jolla 92037). Science 172:61-64 (April 2) 1971.

Tay-Sachs disease is a fatal cerebral degenerative disorder transmitted in an autosomal recessive manner involving the accumulation of a specific lipid, ganglioside GM_2. Fifteen pregnant women with a 25% risk of delivering a child with Tay-Sachs disease were monitored by amniocentesis and hexosaminidase A assays of amniotic fluid, uncultured amniotic cells, and cultured amniotic cells. Tay-Sachs disease was diagnosed prenatally in six fetuses; the diagnosis was confirmed in one child after birth and in five fetuses after therapeutic abortion. Prenatal diagnosis indicated the absence of Tay-Sachs disease in nine other fetuses; this diagnosis was confirmed postnatally in six and three are still in utero.

Down Memory Lane

1. The mortality statistics for Omaha for the year 1920 show the deaths for every 100,000 population to be 242 from tuberculosis; 41 from cancer and malignant tumors of the female genitalia; 8 from cancer of the breast; 6 from Graves disease, and 34 from diabetes.

2. So now we find the old pathology of Rokitansky as found in the dead house replaced by a pathology which works along the lines of physiology and chemistry, thus giving us the pathology of perverted functions.

3. All the tonsil instruments known to the profession cannot take the place of surgical skill.

4. I have seen cases where the syndrome of serous meningitis has been apparently due to focal infection in teeth or tonsils and where removal of the foci has resulted in recovery.

5. The increasing number of cases of methyl or wood alcohol poisoning makes a better understanding of its symptomatology and pathology imperative.

6. It became, then, my duty to decide whether the wounded, upon arrival in Savenay, were suitable for immediate transfer to the United States or whether they should be detained for splints, the correction of deformities, further surgical treatment or even amputation.

7. The Red Cross Nurse as a welfare worker in county and urban schools of Agricultural Nebraska has arrived.

8. The Disabled War Veterans are moving for a government hospital in Nebraska.

9. The question of blood sugar chemistry cannot be omitted from a discussion of diabetes although from the patient's standpoint the study of his blood sugar is of very much less value than many of the things that are commonly neglected in his treatment, e.g., providing him with a set of self registering food scales and teaching him how to use them.

Nebraska State Medical Journal
October, 1921

Standardization of Terminology in Diabetes —N. Baumslag, R. E. Yodkaiken, and J. C. Varady (Univ of Cincinnati Medical Center, Cincinnati 45202). Diabetes 19:664-669 (Sept) 1970.

A standardized questionnaire was sent out to a number of investigators who are known authorities in the field of diabetes mellitus. The confusion that exists in terminology as regards terms such as "juvenile diabetes," "blood relatives," and "positive family history" is clearly demonstrated. Implications of this for genetic and epidemiological studies cannot be ignored. A set of recommendations and a suggested classification for diabetics are proposed to provide a mechanism for making data comparisons and the analyses of results more meaningful.

Monocular Drivers — H. Thalmann (Gerichtlich-medizinisches Institut der Unizersitat, Zurich, Switzerland. Schweiz Med Wschr 101:981-986 (July 10) 1971.

Although monocular drivers should be more of an accident risk in traffic than the binocular driver, statistical studies at the Institute of Forensic Medicine of the University of Zurich showed that such drivers are not above-average source of accidents, and they are able to compensate for their disability by especially careful driving, the main problem being errors in the estimation of distance, which was the reason for monocular drivers in this study being involved in twice as many collisions from behind controls. Narrowing of the visual field appears to be offset by frequent head movements. The monocular driver's slower dark adaptation and increased sensitivity to dazzle, as has been reported in the literature, do not appear to be a disadvantage or particular danger in traffic. Findings in this study do not suggest that intersections are a greater source of danger to monocular drivers than to binocular drivers. Adaptation to sudden monocularity is usually rapid, four months away from driving, or even less in individual cases usually prove sufficient.

Our Medical Schools

U of N volunteers

Students at the University of Nebraska College of Medicine are being recruited to participate in the University's system-wide federally-financed volunteer services program.

Dr. Louis Burgher, a resident in internal medicine at the Medical Center who is in charge of the College of Medicine portion of the program, said three projects are being developed for student placement in the program known as Nebraska Opportunity for Volunteers in Action (NOVA).

NOVA is sponsored by Action, a new federal agency which combines the Peace Corps, VISTA, and other volunteer service agencies.

Dr. Burgher said the target date for medical students to begin their volunteer service is September 26. The projects tentatively include, he said:

—Five students at the Douglas County Annex and pavilion section of Douglas County Hospital which have a patient population of over 300 persons. Each medical student will be in charge of a section, and will serve with a medical faculty supervisor to help provide care for the patients as well as coordinate the activities of allied health professionals and other NOVA workers who are oriented toward the social sciences.

—One student at Broken Bow, Nebr., will study ways to coordinate the delivery of health care with the activities of several health and welfare agencies. Subsequent volunteers at Broken Bow would then, under supervision of local physicians, deliver the health care called for in the first organizational plan.

—Six students would be assigned to the Winnebago and Pine Ridge Indian reservations and the migrant Mexican-American residents in the Scottsbluff, Nebr., area to work toward the development of public health nursing, well baby care, nutritional education and social agency coordination. These students would also work under local medical supervision.

Dr. Burgher said the students who volunteer for the program would be assigned to the project areas for periods of three months and receive academic credit as well as a small stipend to cover their expenses.

Students will work under Dr. Burgher's supervision as well as under the guidance of outstate physicians who hold faculty appointments.

New chief at Creighton

Dr. George O. Clifford of Cornell University will become chairman of the department of medicine at Creighton University's School of Medicine. The appointment was confirmed by Dr. Joseph M. Holthaus, Dean, and Thomas Flickinger, Director of St. Joseph Hospital. Dr. Clifford, 47, will also head the Department of Medicine at St. Joseph Hospital.

Dr. Clifford will assume his position Jan. 1, 1972. He replaces Dr. James Sullivan, acting chairman, who will remain as a full time faculty member.

Currently, Dr. Clifford is an associate professor of medicine at Cornell University's Memorial Hospital in New York City. He earned his medical degree at Tufts University Medical School, Medford, Mass., in 1949 and completed his undergraduate studies at Harvard.

Other states to send students here

Medical students from other states will be coming to Nebraska to join the University of Nebraska Medical Center's preceptorship program.

The program is designed to give medical students first-hand experience in medical practice in rural Nebraska communities. It is required of senior students.

The Student American Medical Association (SAMA) and the Department of Family Practice at the University of Nebraska Medical Center are making the program available to students from medical schools in other states.

Those students will receive academic credit after spending four weeks with a family practitioner, who is also a University faculty member. Students will accompany the physicians in surgery, obstetrics, hospital rounds, clinic or office visits, and night call in various Nebraska communities.

Mrs. Heydman named at Creighton

Mrs. Abby M. Heydman, a 28 year old Des Moines native, has been named acting director of the Creighton University Nursing Program. Mrs. Heydman, who joined the Creighton nursing faculty in 1969, was appointed by Dr. Robert P. Heaney, vice president for health sciences. Mrs. Heydman replaces Miss Dorothy Vossen who is on sabbatical leave.

A member of Sigma Theta Tau, honorary nursing society, Mrs. Heydman received a diploma in nursing from Mercy Hospital School of Nursing in Cedar Rapids, Ia., in 1964. In 1967 she received a bachelor of science degree in nursing from Duchesne College in Omaha and earned a master of nursing degree from the University of Washington in Seattle in 1969.

U of N conferences

1. Congestive heart failure will be the subject of two conferences for nurses sponsored by the University of Nebraska Medical Center in October.

Pat Johnson is coordinator of the sessions, the first on Thursday, October 28 at Chadron State College and the second on Friday, October 29, at the Holiday Inn in Kearney.

The course is partially funded by the Regional Medical Program's coronary care training and support project. A registration fee of $10 will include one luncheon.

The course will aim to acquaint nurses working in small communities with the therapy for the patient in the acute phase as well as in the long-term illness. Sessions will be directed to home care and patient instruction.

2. The seventh annual Cornhusker Conference for Surgeons will be Saturday, October 30, in Lincoln General Hospital. The conference will begin with a dinner on Friday, October 29, at the Lincoln Country Club. Speakers at Saturday's sessions will be Drs. J. Cuthbert Owens and Dr. William R. Waddell, surgeons from the University of Colorado Medical Center. Pain will be the general topic of the conference.

The course carries three hours of credit with the American Academy of Family Practice. Coordinators are Dr. John German, associate professor of surgery, and Dr. Dwight Cherry, clinical assistant professor of surgery.

3. Drug treatment of ischemic heart disease will be the topic of a course November 19 and 20. Guest speakers will be Dr. Roger Jelliffe, associate professor of medicine, University of California at Los Angeles; Dr. Marvin K. Rosenberg, associate professor, Presbyterian - St. Luke's Hospital, Chicago; and Dr. Louis Tobian, professor in the department of internal medicine and director of the hypertension and nephrology unit at the University of Minnesota.

Dr. Charles Hamilton, associate professor of internal medicine, is coordinator of the course, which will be held in the amphitheater of University Hospital.

The course is funded in part by the Regional Medical Program. A fee of $20 will include two luncheons. The course carries twelve hours credit with the AAFP.

O & G traineeship

The annual traineeship in obstetrics and gynecology sponsored by the University of Nebraska Medical Center will be December 6 through 10. Dr. Joseph Scott, associate professor of obstetrics and gynecology is in charge of the course, which is limited to five students.

Advance registration is required. Inquiries may be directed to the department of continuing education, University of Nebraska Medical Center. The fee of $125 includes five luncheons.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—
Oct. 2 — McCook, St. Catherine's Hospital
Oct. 30 — Alliance, Central High School
Nov. 13 — Norfolk, Elks Lodge
Nov. 20 — Grand Island, St. Francis Hospital

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY — Postgraduate Course, October 4 through 9, 1971 at the University of Illinois Hospital Eye and Ear Infirmary. Write to Department of Otolaryngology, Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, P.O. Box 6998, Chicago, Illinois 60680.

RADIOLOGY — Continuing Education Conference — At the University of Iowa Health Center, Oct. 2 and 3, 1971. Write to Director of Continuing Education, Office of the Dean, University of Iowa, Iowa City, Iowa 52240.

OTOLARYNGOLOGY — Post graduate course; Sheraton Four Ambassadors Hotel, Miami, Florida, Oct. 8 and 9, 1971; presented by University of Miami School of Medicine. AAFB credit: 9 hours. Write to: F. W. Pullen, II, M.D., Neuro-Otologic Laboratory, School of Medicine, P.O. Box 875, Biscayne Annex, Miami, Florida 33152.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE — 22nd Annual Session; October 11-15, 1971; Americana Hotel, New York City. Address of AALAS is: 4 East Clinton St., P.O. Box 10, Joliet, Ill. 60434.

BRYAN DAYS — Oct. 15 and 16, 1971; Bryan Memorial Hospital, Lincoln, Nebraska. Write to: George E. Larson, M.D., Bryan Memorial Hospital.

BIOAVAILABILITY OF DRUGS CONFERENCE — Sponsored by the U.S. Pharmacpoeia and the Drug Research Board of the National Research Council, Oct. 18 and 19, 1971, in the new auditorium of the National Academy of Sciences, 2101 Constitution Ave. NW, Washington, D.C. Write to: U. S. Pharmacopeial Convention, 4630 Montgomery Ave., Bethesda, Md. 20014.

NEBRASKA STATE MEDICAL ASSOCIATION FALL MEETING — House of Delegates and Board of Councilors, October 22, 23, and 24, 1971, Holiday Inn, Kearney, Nebraska.

ANNUAL OTOLARYNGOLOGIC ASSEMBLY — October 23 through 29, 1971; in U. of Illinois Eye and Ear Infirmary. Write to: Otolaryngology, P.O. Box 6998, Chicago, Illinois 60680.

ANTIBIOTICS AND INFECTION COURSE — Oct. 28, 29, 30, 1971. Write to: Ian Maclean Smith, M.D., University of Iowa Hospitals, Iowa City, Iowa 52240.

OMAHA MID-WEST CLINICAL SOCIETY —39th Annual Postgraduate Assembly; November 1, 2 and 3, 1971; Omaha Hilton Hotel. The Society's address is 1040 Medical Arts Bldg., Omaha 68102.

NEBRASKA SOCIETY OF CLINICAL HYPNOSIS — Two day course in Medical and Dental Hypnosis, including Group I (beginners) and Group II (advanced) on November 13 and 14, 1971, presented by Kay F. Thompson, D.D.S. and Robert E. Pearson, M.D. It will be held at the Holiday Inn, 3321 South 72nd Street, Omaha, Nebraska. Application forms obtainable from Nebraska Society of Clinical Hypnosis, 6540 Florence Blvd., Omaha, Nebraska 68112.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City.

NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION 25TH CLINICAL CONVENTION — New Orleans, Louisiana, November 28 - December 1, 1971.

NEBRASKA STATE MEDICAL ASSOCIATION ANNUAL SESSION — April 30-May 3, 1972, Hotel Cornhusker, Lincoln, Nebraska.

NEBRASKA STATE MEDICAL ASSOCIATION ANNUAL SESSION — April 29-May 2, 1973.

AMERICAN MEDICAL ASSOCIATION ANNUAL SESSION — June 18-22, 1972, San Francisco - Hilton Hotel, San Francisco, California.

The Letter Box

To the Editor:

The University of Nebraska Medical Center will sponsor its Fourth Annual program concerning Recent Advances in Otolaryngology on January 20th and 21st, 1972. The meeting will be immediately followed by the Middle Section Meeting of the American Society of Otology, Rhinology, and Laryngology in Omaha. Dr. George Sisson, Dr. James Snow, and Dr. Philippe Shubik will be guest speakers at a symposium on Head and Neck Cancer in conjunction with the meeting. For further information, contact the Department of Continuing Education, the University of Nebraska College of Medicine, Omaha, Nebraska 68105.

Sincerely,

C. T. Yarington, Jr.,
M.D., F.A.C.S.,
Professor and Chairman

G. Van Leeuwen, M.D.
Department of Pediatrics
University Hospital
Omaha, Nebraska 68105

John H. Mattox, M.D.
University of Nebraska Medical Center
Omaha, Nebraska 68105

Ramon M. Fusaro, M.D.
Department of Dermatology
University of Nebraska Medical Center
Omaha, Nebraska 68105

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Millard, Nebraska 68137

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5440 South Street
Lincoln, Nebraska 68506

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Lincoln, Nebraska 68509

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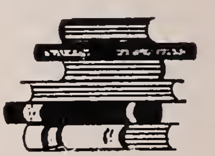

Review of Physiological Chemistry, by Howard A. Harper, Ph.D.; published 1971 by Lange Medical Publications, Los Altos, California. 13th edition, 529 pages (7⅛" by 10¼"); price $8.00.

Dr. Harper is Professor of Biochemistry at the University of California School of Medicine. The **Review** has been translated into 5 other languages, and a 6th is being prepared.

There are 22 chapters, an appendix, and a good index. The printing is easy to read, and boldfaced type is used freely to make it even easier. Figures appear throughout the book, and references and bibliography are supplied with every chapter.

The first edition of the **Review** appeared in 1939; 13 editions in 32 years mean a new one every two and a half years or less; being up-to-date is obviously a feature of this text.

The cover is flexible, but good. The book weighs 2⅜ pounds, so that it is priced at a little over $3 a pound, something like the cost of a steak, but I prefer the book. It seems well written and comprehensive. I recommend it.

—F.C.

Medicinews

AABB requires hepatitis-associated antigen tests

The American Association of Blood Banks (AABB) is amending its Standards to require testing of all donor blood and blood components for the hepatitis-associated antigen. Beginning October 1, blood banks must fulfill this requirement for accreditation by the Association, it has been announced.

"These new tests will increase the cost of blood processing in the United States by several million dollars, perhaps as much as $5,000,000, but will enhance greatly the quality of transfusion service," said Dr. John Bernard Henry of Syracuse, N.Y., President of the Association.

"With general use, ways probably will be found to increase the presently 20 to 30 percent effectiveness of these tests in detecting carriers of hepatitis."

Hepatitis-associated antigen tests will be the subject of a workshop, many exhibits and several scientific papers at the Association's 24th annual meeting at The Palmer House, Chicago, Sept. 12-16.

While hepatitis-associated antigen tests involve additional equipment and materials, some blood banks are performing them without increasing processing fees.

Florida to issue medical licenses by endorsement

Effective September 1, 1971, for the first time in history, the Board of Medical Examiners of Florida may issue licenses by endorsement to practice medicine and surgery in Florida. An amendment to the Medical Practice Act of Florida, enacted by the 1971 legislature allows issuance of licenses by endorsement to those M.D.'s who have been certified by the National Board of Medical Examiners or the Federation Licensure Examination (FLEX) within a period of eight (8) years preceding the date of application for licensure by endorsement. Since the effective date is September 1, 1971, this means that an M.D. must have been certified by the National Board of Medical Examiners since September 1, 1963, in order to initially be eligible for licensure by endorsement. As far as other state licensure examinations are concerned, this amendment only applies to those states who use the Federation Licensure Examination (FLEX) as their licensure examination.

In the case of foreign medical graduates, this does not eliminate the requirement that the M.D. have papers of first intention of citizenship and a minimum of one year's residency in the United States and the Educational Council for Foreign Medical Graduates Certificate of proficiency. A very important feature of the amendment is the provision that a physician who receives a license by endorsement in Florida must practice in the state within a period of three years for a minimum period of one year. If he does not do this the license will become null and void. Service in the armed forces is exempt during these years, but internship or residency time is not exempt.

Midwest plastic surgeons meet

The eleventh meeting of the Midwestern Association of Plastic Surgeons was held May 6-8 in Chicago, Illinois. An excellent scientific program was enjoyed by approximately 50 members and guests. The following officers were elected for 1971-72: Robert J. Richardson, M.D., Peoria, Illinois, President; G. William LeWorthy, M.D., Lincoln, Nebraska, President-Elect; Morrison D. Beers, M.D., Chicago, Vice President; John Simmons, M.D., Rochester, Minnesota, Secretary and Hal Bingham, M.D., Columbia, Missouri, Treasurer. The 1972 meeting of the Association will be held in Peoria, Illinois at the Ramada Inn Motel March 16-18.

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Physicians' Classified

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FOR SALE — Due to retirement, Picker X-ray, 200MA, new rotating anode tube, fluorescope, manual tilt table and dark room equipment $1,000.00. Also, sonar, Cambridge EKG, 5 microtherms, autoclave and microscope. Area code 308-235-2690, Kimball, Nebraska.

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The Law . . .

Mortgage insurance

John M. Chenault, M.D., a member of the Board of Trustees of the AMA, appeared before the Subcommittee on Housing and Urban Affairs to present AMA testimony in support of S. 2269, the Medical Group Practice Insurance Amendments. The bill would amend the National Housing Act to provide mortgage insurance for the construction and rehabilitation of medical practice facilities in which from one to four physicians practice. In order to qualify for such insurance, the facility would have to be located in a shortage area. Dr. Chenault said, "S. 2269, by providing financing assistance, may help to stimulate the establishment of a medical practice by an individual practitioner or a small group of physicians in small and rural communities and inner city areas having physician shortages."

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Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

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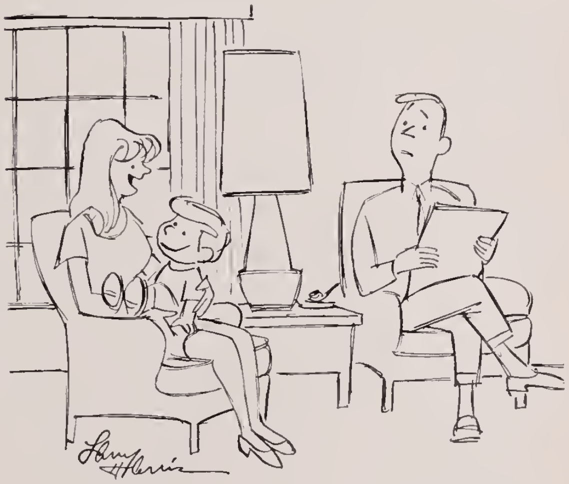
Announcement of the 1972 Alfred A. Richman Essay Contest has been made by the American College of Chest Physicians. The annual contest is designated to encourage undergraduate medical students to explore and investigate problems relating to the disciplines of the chest, and to present their findings in open competition for the benefit of other students and investigators.

Research or review articles relating to the diagnosis or treatment of cardiovascular or pulmonary disease are acceptable. In accordance with the rules of the contest, preceptors are at liberty to assist the student in selecting a suitable subject and guide him in the preparation of his essay.

Three cash prizes totaling $1,000 are awarded annually. The First Prize will be $500; Second Prize, $300 and Third Prize, $200. Each winner will also receive a certificate of merit. The medical school attended by the First Prize Winner will be awarded a trophy inscribed with the name of the student and the school.

The deadline for entering this year's competition is March 31, 1972. The official application form may be secured by writing Essay Contest, American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois, U.S.A.



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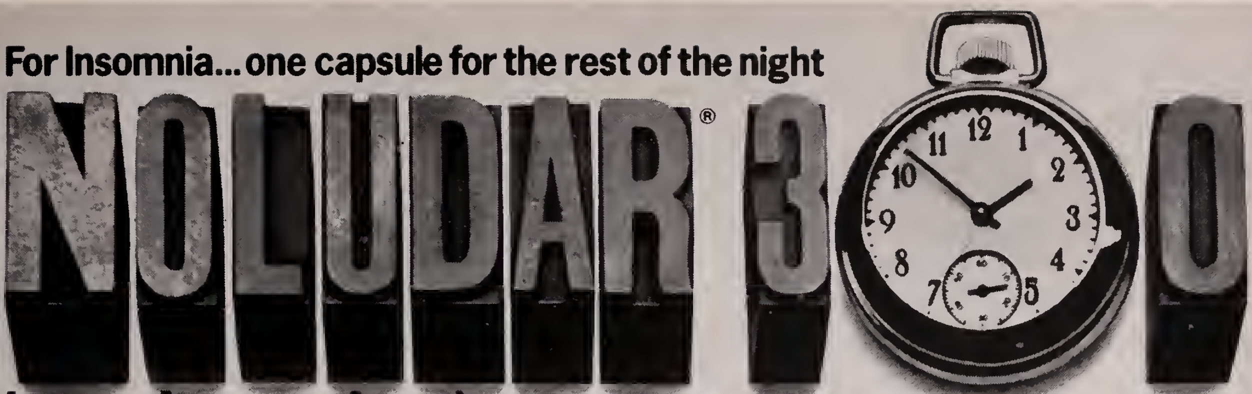

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THE NEBRASKA STATE MEDICAL JOURNAL

IS DIAGNOSIS A LOST ART?

The trend in diagnosing seems to be going from good to bad. Once we had a thing called Banti's disease, and when we got smarter, we broke it up into properly diagnosed fragments. But now we regroup fragments into catch-alls called dysfunction, syndrome, defect, hypofunction, deficit, insufficiency, condition, impairment, deficiency, and simply disease.

If the lungs are obstructed, we say obstructive lung disease; and if it's chronic, and the *patient* can tell us that, it's chronic obstructive lung disease. Of course, a bowel obstruction is a bowel obstruction, but the physician must distinguish between tumor and adhesions and even ileus. The trouble is that we have become lazy and are satisfied to diagnose chronic obstructive lung disease and nothing more.

What kind of a diagnosis is brain syndrome? This must be the prize, for it says nothing the patient's family did not know. If the laboratory reports show that the adrenals are not functioning well, we need only to say adrenal dysfunction. Even the astronauts, we are told, are troubled by malfunction of something that doesn't work; malfunction is what we used to call a weasel word.

And if the lungs are not doing what lungs are supposed to do, how easy it is to diagnose pulmonary insufficiency. There's cardiac insufficiency, too, and pancreatic hypofunction. There's neurological deficit, and renal impairment. The patient may even have a liver condition, or plain old heart trouble.

Why study?

—F.C.

MEDICINE AND MACHINES

I think the computers have taken over without a fight. I know they print histories and make diagnoses, but *naming diseases* is going too far. We seem to have run out of words, and eponyms have developed a fatal illness of their own. For once we had such lovely titles as Laurence-Moon-Bardet-Biedl syndrome and Charcot-Marie-Tooth disease, and what have we now?

Virus X, Q fever, AAA disease, B virus, x disease, A fever, V virus, and x-rays.

The Q in the fever is for *query.*

—F.C.

WHAT GRADE?

In looking at charts, I often read of grade II murmur, or that the patient has a grade I weakness of a hand. It is not possible to know what the examiner means unless we know how many grades he is using. Grade IV is obviously worse on a one to four scale than if a ten grade scale is used.

I have several remarks to make here. First, one to four is generally used; but not invariably. Second, grades are usually written in Roman numerals, and I do not know why. Third, write "grade two on a one to four basis," and the reader will know what you mean.

And finally, why not use the percentage system? If the hand weakness is grade one on a one to five system, just say he has lost 20 percent of his grip.

Grade one does not tell you what state *he* is in, but it leaves *you* in the state of confusion.

—F.C.

WONDERFUL X

Of all the devices doctors use in abbreviating words when they must write them with their very own hands, none is as useful or as frequently employed, as the letter X. For if A was scarlet, X is golden. You have only to add an X to the first letter of the word you want, and you have abbreviated it.

Consider: FX is fracture (it's also frozen section). DX means diagnosis (or dextran). BX stands for biopsy. PX is physical examination, or pneumothorax, or prognosis. And HX, of course, is history.

RX is the ancient symbol of the medical profession and means take, but now we write RX for treatment or prescription. SX represents signs or symptoms. TX stands for traction, and also for treatment. LX is local irradiation, and CX means cervix, or convex, or chest x-ray.

AX is written for axis, and GX for graded exercise. EX is used in place of excision, or just means from. And OX is substituted for oxymel, which is honey and vinegar, I think.

Of course, X stands for unknown, and for xenon, and for ten. With a line over it, it means ten thousand; and on its side, it becomes one thousand.

There's an x disease, and X is the homeopathic symbol for the decimal scale of potencies, and is a chromosome, and is the abbreviation for Kienbock's unit of x-ray dosage. It means magnification, removal of something, respiratory rate (on an anesthesia record) or the start of anesthesia: and times, as 3X. Of course, there's S-X, and I once rode in an automobile called an SX, or something like it.

Then there's XS for excess, XR for x-ray; and XM, which means crossmatch. And we draw a big X through something we're done with, or we say: X it out. And at the end of an essay you can write 30, or XXX. At the end of letters, too.

—F.C.

While Making Rounds

O Come On.

"Scar: the middle end of the right clavicle."

"Two appendectomy scars."

New Books For Old.

I've seen books on everything; that is, a whole book devoted to a single subject, like the parotid gland or the umbilicus. But if someone should some day write a book about the appendix, would it have an appendix?

Abortions.

Had a letter from a hospital soliciting abortion referrals. True, there might have been none of the comment that followed if the letter had been about hernias, but no letter was written about hernias.

Pay The Doctor.

They want a doctor in an innominate state, and the salary is $20 to $22,000." That's the widest range I've ever seen, and they won't get many at the lower figure. Not until we get national health insurance.

I Don't Believe It.

The word mammoth, meaning a very large and now extinct elephant, is supposed to be derived from the word for earth, because the remains of mammoths have been found in the earth. But all remains are found in the earth, and anyway, mammoth means very large.

Radiology.

I half-opened a medical journal, and on the right side of the exposed page was a hazy conglomeration of grays and whites, obviously an x-ray illustration accompanying an article or one of those humiliating quizzes. So I interpreted it with my usual brilliance; I am not a radiologist, but I could easily make out transverse processes, and bowel shadows or translucensies or whatever bowels have, and other structures I cannot bring myself to name. Because when I opened the journal to its full width, it was a picture of a medical meeting, and all the things I had diagnosed were out-of-focus objects in the background, like chairs and tables. The photographer's lens was wide open, I guess, but my eyes weren't, and I wonder how much is read into x-rays that isn't there. Especially by nonradiologists.

Editors' pictures.

Medical journals sometimes resemble art galleries, with pictures of authors and columnists, and they can as easily look like rogues' galleries, with those fearsome faces staring back at you from pages of learning. But some of these face-owners, like Little Orphan Annie, seem to have discovered the secret of eternal youth, and their pictures never change with the years.

On Ice That Hardly Bears Him.

Swimming and skating scores run from five to six, for no reason I care to hear. Nothing can ever go over six, and I cannot remember when anything fell below five. In that case, whatever are the five and six for? Five to six can be represented by zero to ten, and that makes a lot more sense than all that silly holding up of the invariable five and the rare six. They're holding up zero to ten now, but they keep sticking that foolish five up every time.

Matchmaker, Make Me A Match.

A carpenter originally made wagons, carriages, and chariots. A tailor was one who cuts, and a plumber was a worker in lead. The painter paints, or course, and the landlord is the lord of the land, but the grocer is one who sells wholesale. One day, as Madame Butterfly says sadly, when I have enough courage, I am going to ask a shoemaker to make a shoe, and a watchmaker to make a watch.

They're All In The Dictionary.

The zone of alarm.

Dance of the arteries.

And my favorite anatomical structure: the lyre of David.

—F.C.

Report of a New Family With Peutz-Jehgers Syndrome

RICHARD O. OLSON, M.D.[*]
and
JOHN A. RASMUSSEN, M.D.[†]

Abstract

WE are reporting four members of a family with Peutz-Jehgers Syndrome who illustrate the problems of colicky pain, anemia, and intussusception in the management of this disease.

When operation is necessary to treat the complications of this disease, conservative resection and polypectomy should be used to preserve as much bowel as possible.

The final answer on the premalignant nature of these polyps is not available. These patients should be followed for possible development of duodenal or colon carcinomas.

Patients with circumoral pigmentation and gastrointestinal polyposis continue to be a source of interest and challenge to clinicians throughout the world. We have had the opportunity to care for a family consisting of a father and three children with this syndrome. Recurrent colicky pain, anemia, intussusception, and possible malignancy make the satisfactory care of these patients difficult. We present them in order to review the treatment of this syndrome.

Case Reports

Case #1: The patient was first seen in 1945 at age 17. He had a history of abdominal cramps, nausea, and anemia since childhood. Physical examination revealed multiple pigmented spots on lips and buccal mucosa but none on his hands (Fig. 1). At that time we performed a colon resection for intussusception secondary to small bowel polyps. Two years later partial colectomy was performed on two separate occasions for rectal bleeding secondary to small bowel

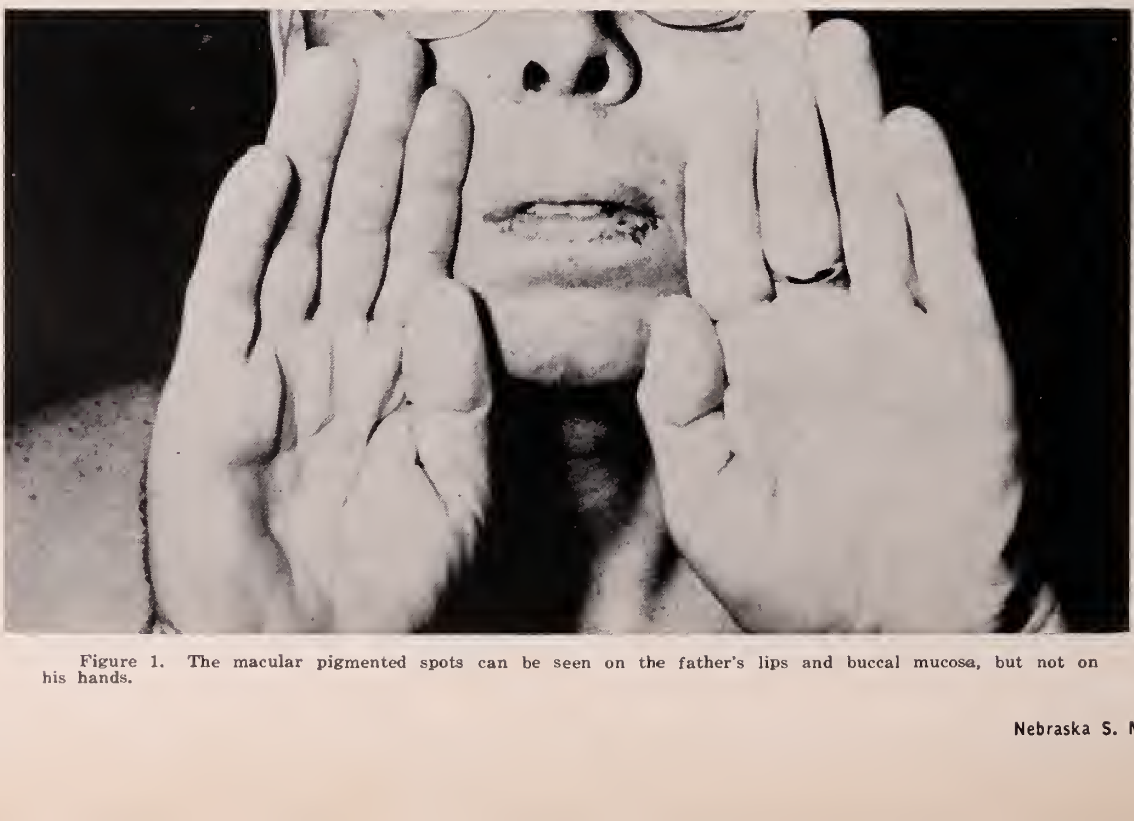

Figure 1. The macular pigmented spots can be seen on the father's lips and buccal mucosa, but not on his hands.

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[†] Associate Professor of Surgery, University of Nebraska College of Medicine, Omaha, Nebraska 68105

and colon polyps. For the next five years, we removed polyps through the rectum on numerous occasions. In 1954, we again removed multiple small bowel and gastric polyps through multiple enterotomies. In 1961 and 1967 we resected short segments of small bowel and removed many small bowel and colon polyps through enterotomies.

The patient has also had two other soft tissue tumors removed. We excised a cystic basal cell carcinoma of the neck in 1964 and resected a thyroid adenoma in 1968.

He has been asymptomatic with a normal blood count since 1967.

Case #2: The patient is a son of patient number one and has circumoral pigmentation similar to his father. We operated upon him when he was 2 years of age. We removed thirteen small bowel polyps through multiple enterotomies for cramping abdominal pain and anemia. He did well for two years when one colon and ten small bowel polyps were removed in smilar fashion. In 1960 we performed operations twice for gastric, small bowel and colon polyps. He is currently 19 years old and is doing well.

Case #3: This daughter of patient number one was noted to have oral pigmentation at birth in 1955. Her first operation was at 16 months of age when a large colon polyp was removed for abdominal pain. At age 12 years she had multiple polyps removed without bowel resection. In 1968, we removed gastric, small bowel, and rectal polyps again without resection. In 1969 a large prolapsing colon polyp was removed through the anus. Since then, she has had crampy abdominal pain and is anemic. She is known to have three large gastric polyps demonstrated with an upper gastrointestinal series.

Case #4: This son of patient number one was first seen in 1955 at the age of 2 years. He was healthy and without symptoms. We again examined him when he was 4 years old and noted circumoral pigmentation and crampy abdominal pain. When he was 11 years old, two small polyps were removed transrectally. Since then two other lesions have been removed from the colon and he is known to have one 2 mm. rectal polyp at the present time. Barium enemas and small bowel series have been normal. He is not anemic.

Incidence

This syndrome was first reported by Sir Jonathan Hutchinson in 1896 in identical twins. They had circumoral and buccal pigmented spots.[1] One twin died at age 20 of intussusception. The second twin died of breast cancer at age 35 years. Both were reported to be in good health originally except for anemia of undetermined etiology.[2] Peutz in 1921 and Jehgers in 1944 fully defined the syndrome and its genetic nature.[3, 4] Since then, the number of case reports has increased steadily.

In 1968, Dozois found 321 case reports; we have found one additional report and added four more of our own.[5, 6]

The age of these patients at first diagnosis ranges from 2 to 82 years.[7] Two of our siblings are unique in that one was noted to have the pigmentation at birth and both were operated upon before age two for symptomatic polyps.

There is no predilection as to sex. This is expected in a simple Mandelian dominant. In the early case reports most of these patients had a family history suggestive of the problem; however, a number of isolated cases are now being reported. This suggests an occasional isolated mutation.[7] It has been suggested that even with careful genetic counseling of these families the number of known cases will continue to increase.

The genealogy of our family shows that the grandmother was known to have oral pigmentation and chronic crampy abdominal pain (Fig. 2). Two of her four children, including our first patient, had both pigmentation and documented polyposis. Whether the grandmother represents a mutation or not is not known because of lack of knowledge of the great grandparents.

Pathology

The polyps of Peutz-Jehgers syndrome occur anywhere in the gastrointestinal tract, although the jejunum, ileum, colon, and stomach are the most common sites. They vary in size from millimeters to several centimeters in diameter. They may be pedunculated or sessile[7] (Fig. 3).

As in three of our patients, many polyps per square inch may be present and removal of all polyps at any one operation may be impossible.

The polyps were originally thought to be adenomas and because of their bizarre microscopic appearance were considered to be precancerous. They are now known to be hamartomas.[6] This tumor, which in most other regions of the body is benign, contains all of the cell types found in the segment of gastrointestinal tract in which they are located (Fig. 4). The normal appearing cells are frequently arranged in a disorderly fashion and many mitosis are present. We feel this accounts for the high number of malignant diagnoses made in the first reports.

The question of malignant potential continues as a number of cases have now been reported in which the authors felt the malignancy originated in a polyp. Dozois et al, in a recent extensive review of this problem concluded there is no definite evidence that any patient had succumbed to carcinoma which had begun in a hamartomatus polyp. Other authors have felt that more evidence is needed especially in light of the number of carcinomas of the duodenum in young people which have been reported.[6, 8]

Adenomatous polyps of the colon can coexist in these patients and one death has been reported in such a patient who had multiple adenocarcinomas arise from these polyps.[9]

We note other soft tissue tumors are common in these patients. Humphries[10] found 5 per cent of females had an ovarian tumor and suggested that this be included in the syndrome.

Lynch,[11] in a review of the hereditary factors present in patients with multiple primary neoplasms, states blood group A cor-

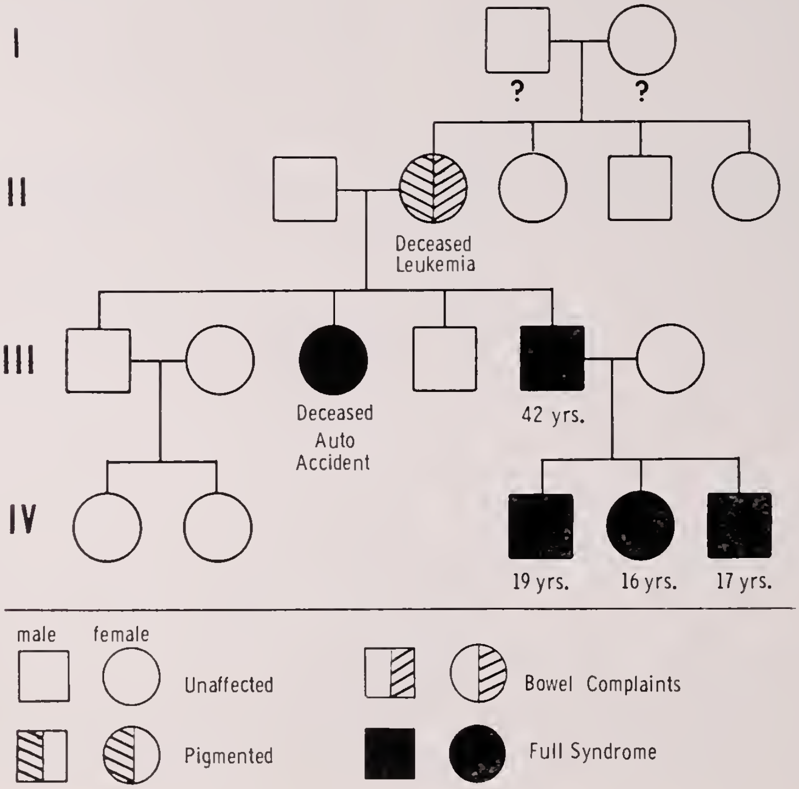

Figure 2. Genealogy of this family.

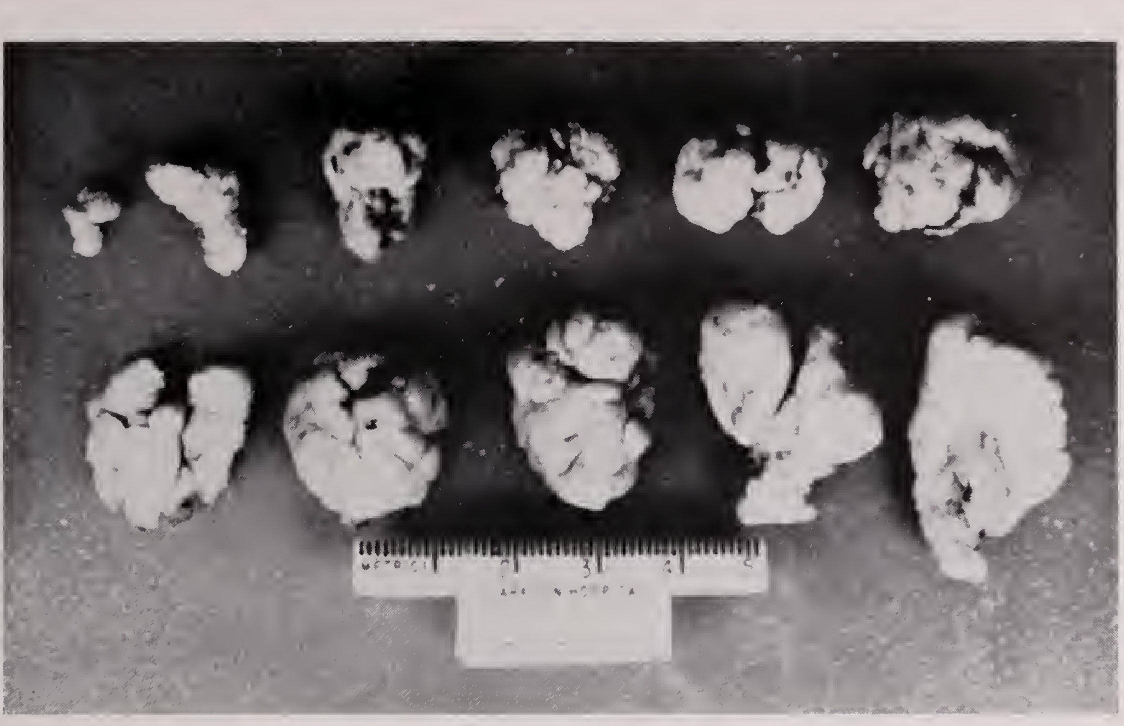

Figure 3. Gross appearance of the hamartomas.

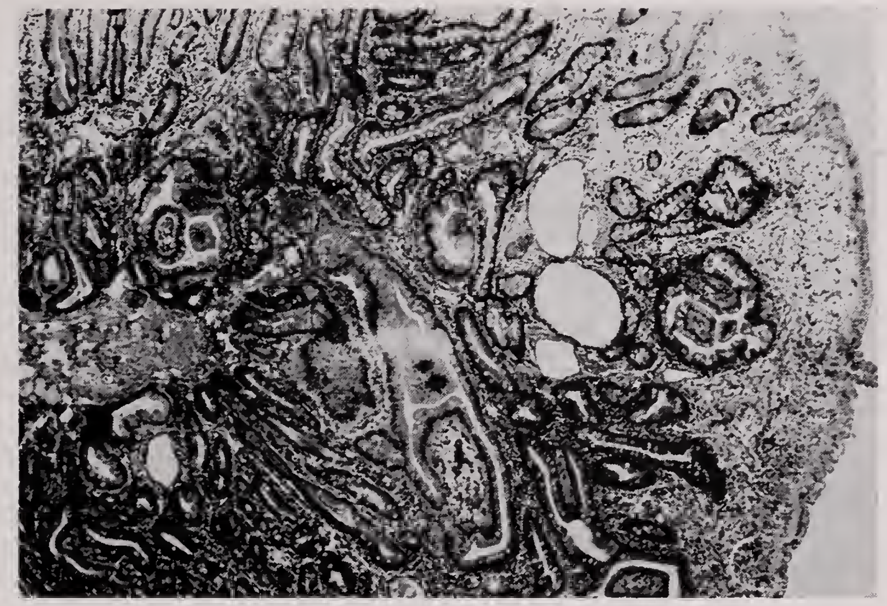

Figure 4. Microscopic appearance of the hamartomas.

relates well. Three of our patients have been blood typed and all three are blood type A positive.

Therapy

We believe the basic principles of treatment are conservative operation and careful follow up.

Because of the extensive nature of the polyposis, complete resection of all polyps is usually impossible and would eventually lead to short bowel syndrome, malnutrition, and death. Therefore, when anemia or symptoms force operation, conservative resection or multiple enterotomies and polypectomies should be done preserving as much bowel as possible. All polyps should be submitted for microscopic examination to determine whether the polyp is malignant. In the colon, if the polyps prove to be adenomas rather than hamartomas, the patient should have a subtotal colectomy. Each member of the family with pigmented spots should be followed carefully from the time of original diagnosis. Females should have a thorough pelvic examination regularly for the possible development of ovarian tumor.

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Aspirin Disease and Adverse Effects

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ASPIRIN, acetylsalicylic acid, is the most commonly used drug in the United States and the world. Annual consumption in this country ranges between 13 and 20 million pounds.[1] Aspirin is a proven effective analgesic, anti-inflammatory and antipyretic agent, and is the drug of choice in the treatment of rheumatoid arthritis, and rheumatic fever. However, the majority of aspirin is consumed, not for its beneficial effect in rheumatic disorders, but as encouraged by the advertising media for minor headaches, pains, aches, and hangovers. It is considered to be a safe drug, yet in the average medical practice, untoward reactions caused by aspirin are becoming more common. It is the purpose of this paper to bring to your attention some of the more common adverse effects encountered with the use of aspirin with particular emphasis on aspirin disease.

The overall incidence of sensitivity to aspirin is .2% of those patients taking the drug with between 2% and 4% of those patients with asthma exhibiting reactions to the drug.[2] Up to 20% of the patients seen at the National Jewish Hospital with severe asthma have some degree of aspirin intolerance as shown by a marked increase in bronchospasm within minutes to hours after ingesting the drug.[1]

Aspirin Disease

In our practice, in one year's time, we have seen nine cases of aspirin disease, a triad of nasal polyposis, sinusitis, and asthma, with clinical aspirin sensitivity. This disease entity was first described by Samter in 1968, and occurs characteristically in female patients, with the onset of symptoms between the second and fourth decade.[3]

A table showing some common characteristics in the patients in our practice is enclosed. These figures compare favorably with those groups of patients as reported elsewhere.[2, 3, 5]

The mechanism of aspirin disease and untoward reactions to the drug are not known. The mode of action of salicylates include the ability to uncouple oxidative phosphorylation processes in respiring mitochondrial preparations, direct action on the intra-mitochondrial enzyme systems, and the resulting decrease in synthesis of high-energy phosphate bonds involving adenosine triphosphate and creatinine phosphate. Reduced ATP synthesis, in turn, alters tissue metabolism, controls or changes fluid electrolyte movement from cells to extracellular fluid, and interferes with enzyme reactions including those involving histamines. There is evidence of adrenocortical stimulation following salicylate administration.[4]

Aspirin is hydrolyzed in the alkaline medium of the blood or duodenum and is broken down into salicylic and acetic acid, a reaction which is 98% complete. Up to 80% of these salicylates are then bound to albumin. It was first observed by Farr that aspirin caused an abnormal binding by albumin of sodium acetrizoate in vivo.[1] He further demonstrated that other protein fractions are also altered, some with strong covalent bonds. These proteins include various fractional immunoglobulins, fibrinogen, and thyroglobulin. Measurements of alteration of the glomerular basement membrane or the chemoreceptors in the lungs or other organ systems have not been done, but it can be speculated that abnormalities of the organ systems can exist, and may help to explain some of the reactions we see in people with intolerance to aspirin.

Convincing evidence for an immunological reaction has been lacking, and this has been further confirmed in studies by Yurchak, who evaluated aspiryl-chloride in three immunological experiments. Skin testing, immunofluorescent staining of nasal polyps, and lymphocyte culture in the presence of aspirin failed to show evidence of an antigen-antibody reaction.[5]

Samter proposes that an underlying disease alters kinin receptors in the lungs and capillaries, as well as other tissues. Aspirin, in sensitive patients, stimulates these receptors and causes symptoms similar to those produced by the kinins, which are known to cause bronchospasm. The induction of such symptoms in aspirin-sensitive patients by chemically-unrelated compounds such as indomethacin and hydrazine yellow suggest a nonimmunological process may be involved.[3]

Other mechanisms offered to explain aspirin disease concern the activation of complement components and the release of histamine by "anaphylatoxins." Also postulated is an enzyme inhibitor deficiency such as seen in hereditary angioneurotic edema.[5]

As opposed to aspirin disease — aspirin sensitivity, aspirin idiosyncrasy, intolerance, or side effects, are seen even more often.

Urticaria

Aspirin is estimated to be responsible for 5% to 10% of acute and chronic urticaria.

NINE CASES OF ASPIRIN DISEASE

1969 - 1970

Age	Sex	Onset	Initial Asthma c ASA	Steroids *A	Polyps *B	Sinusitis by X-ray	Skin Tests Positive *C	Family History Atopy	Other Atopic Symptoms *D
(20)	F	16	No	Yes	3x	Yes	No	No	PAR
(46)	F	23	Yes	Yes	6x	Yes	No	No	PAR, HF
(59)	F	59	Yes	Yes	Yes	Yes	Yes	No	None
(22)	F	21	Yes	Yes	Minimal	?	Yes	No	PAR, HF
(24)	M	17	Yes	Yes	2x	Yes	Yes	Yes	PAR, HF
(62)	F	40	No	No	4x	Yes	Yes	Yes	PAR
(37)	F	35	Yes	Yes	No	Yes	Yes	Yes	HF, PAR
(25)	F	20	No	Yes	Change	Yes	Yes	No	HF
(34)	F	30	No	No	No	Yes	No	Yes	HF, PAR

A—Steroids in doses from 5-20 mg Prednisone daily were required at some time in illness to control asthma unresponsive to the usual measures.

B—Indicates presence of nasal polyps or number of times surgical removal necessary

C—Skin tests, scratch and intradermal, were performed to exclude reaginic activity. A wheal between 5-10 mm. was considered 2+ positive. Those with more than 10% of tests positive were considered to have reaginic activity.

D—PAR—Perennial allergic rhinitis.
HF—Seasonal hay fever.

Platelet Dysfunction

Platelet dysfunction due to inhibition of the release of platelet ATP has been recognized as a factor causing the prolongation of bleeding time.[6, 7] It has been reported that aspirin covalently acetylates platelets in vitro for the life of the platelet itself, 17 days. Aspirin is the second most common medication taken during the last trimester of pregnancy. Sixty-nine per cent of pregnant mothers in one study had taken aspirin at some time.[8] Platelet dysfunction related to the inhibition of collagen aggregation and a diminished factor 12, Hageman factor, activity was shown in some of these patients. No serious bleeding episodes occurred during this small study in infants of mothers ingesting aspirin.

Gastrointestinal Bleeding

It is common knowledge that aspirin is the cause of some gastrointestinal blood loss. Most individuals taking the drug on a regular basis consume from 1.5 to 3 grams daily. Occult blood loss occurs in at least 70% of these cases.[10] Discrete ulcerative and hemorrhagic areas, which are sharply demarcated and which contain areas of focal necrosis, appear in the stomach within several days after the initiation of aspirin therapy. Direct injury to the gastric mucosa has been documented through a gastro-camera. This irritation seems to be reduced or eliminated with increasing gastric pH by buffers.[11]

A recent study of 125 patients seen with acute gastrointestinal blood loss revealed that 80 of these patients had taken aspirin in some form within 48 hours of the onset of their illness. Forty-seven of these patients had bleeding of unexplained cause, while the remainder had proven varices, cancer or ulcer. In 40 of the 47 patients, aspirin had been recently ingested.[10]

Poisoning

True incidence of salicylate poisoning is unknown. In those documented cases occurring in 1964, salicylate ingestion accounted for 16,328 total cases of accidental poisoning, or 25.8% of the total number reported. Of the 388 accidental deaths from poisoning in children under the age of five, 124 or 32% of these were due to the accidental ingestion of salicylates. Salicylates are second only to barbiturates as the drug most often used in suicide attempts.[12]

Aspirin should not be used indiscriminately. If possible sensitivity or adverse reactions are suspect, Tylenol or plain Darvon are appropriate substitutes when analgesia is required.

Suggestions Regarding Aspirin

1. Be aware of the adverse or untoward reactions to aspirin.

2. Aspirin should be used only when specifically indicated.

3. In patients with aspirin disease, (bronchial asthma, nasal polyps, sinusitis) and aspirin sensitivity, aspirin or aspirin-containing compounds, and in some individuals, hydrazine yellow, are contraindicated.

4. Patients with nasal polyposis or those with asthma or similar atopic history should be carefully screened with regard to possible aspirin sensitivity. Aspirin substitutes would seem appropriate in all cases.

5. A careful history should include specific questioning regarding the amount of aspirin consumed, particularly when presented with symptoms which are possibly related to aspirin.

6. Aspirin is contained in over 300 compounded preparations. Two successful lawsuits have been brought against physicians for prescribing compounds containing aspirin and which resulted in adverse effects.[13]

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Senile Dementia Check List

To be considered before sending patients to nursing homes

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A common problem brought to medical attention today is that of an elderly person whose recent memory is failing, who is gradually becoming disoriented, and failing in skills and habits. On brief examination, it is commonly assumed that these patients are suffering from cerebral neuronal degeneration ("senility") or cumulative effects of numerous small cerebral infarctions. Most of the time, one or both of these diagnoses is correct, but a differential diagnosis should be run through to rule out particularly some definitely treatable conditions. This check list includes the following (the commoner are in bold face):

(1) Endocrine diseases, particularly **myxedema,** less commonly Addison's disease, hypopituitarism, hypo-or hyperparathyroidism and the complications of **diabetes mellitus.**

(2) **Deficiency diseases,** particularly of vitamin B complex, vitamin B-12. **Anemia.**

(3) Disturbances of electrolytes and **hydration.**

(4) Insidious infectious diseases.

(5) Trauma, particularly subdural hematoma.

(6) Myeloproliferative diseases.

(7) **Occult malignancy.** This includes primary brain tumors, metastatic tumors.

(8) **Exogenous toxic agents.**

(9) Collagen diseases, especially systemic lupus erythematosus, temporal arteritis, and periarteritis nodosa.

(10) System failure: particularly renal, cardiac, hepatic, or pulmonary.

(11) Low pressure hyodrocephalus.

(12) **Depressed emotional state.**

Endocrine Disturbances

Myxedema and diabetes mellitus are common and should be easy to detect by ordinary laboratory tests. I strongly urge, however, that urinalysis or fasting blood sugar be not used as a means of detecting occult diabetes mellitus, but rather a minimal requisite would be a two hour postprandial blood sugar. Recent mental failure may appear insidiously with ketogenic acidosis as well as hyperosmolar hyperglycemic states which may build up in diabetes mellitus. One of the most common causes of hypoglycemia appears with early, often mild and as yet undiagnosed diabetes. It is often forgotten that hypo-or hyper-parathyroidism may be manifested by mental disturbances outstanding, with depressive, confusional, delirious, or demented states. Likewise, it should be recalled that age does not prevent a patient from also having pituitary tumor or atrophy with resultant hypopituitarism. Addison's disease may also appear in the elderly.

Deficiency States

Deficiency states are not unusual in the elderly, particularly those living alone and not attending to proper nutrition. Pellagra, beriberi, and other vitamin deficit states may develop insidiously, manifested considerably by diminished mental function. It is often forgotten that occasionally pernicious anemia (vitamin B-12 deficit) may manifest outstandingly with mental confusion or dementia. The unwary physician may overlook the typical anemia or forget that sometimes the peripheral blood picture can be in a remission while the neurologic disorder progresses. It is very easy to obtain a Schilling test today. If necessary to insure proper collection of urine, a retention catheter should be inserted. Simple anemia may provide the "last straw" in impoverished cerebral blood flow through stenotic arteries; its cause must be sought and normal blood picture restored.

Disturbances of Hydration and Electrolytes

Elderly patients, particularly living alone or in nursing home or hospital environments, become quite dehydrated. This may be aggravated by diuretics, hot weather, or overheated rooms. It is necessary sometimes to insist on intake and output estimation, and that adequate fluids be provided parenterally if necessary. A combination of hydration, electrolyte, and acid-base disturbances may produce a confused mental state. If disturbance of a single electrolyte alone is at fault, this is usually calcium (either excessive or deficient) or magnesium (deficiency). Carbon dioxide narcosis should also be recalled, as it may develop insidiously, particularly in the patient with any cause for pulmonary insufficiency (acute or chronic), resulting in considerable lethargy, mental dullness, and confusion.

Infectious Diseases

In the elderly, the outstanding phenomena of infectious disease may be blunted. This will be particularly so in those who are debilitated. Subacute bacterial endocarditis may produce outstanding cerebral symptoms easily dismissed as being due to senility or "stroke" because the low grade fever, heart murmur, anemia, and embolic phenomena were not discerned or put together for what they mean. Pneumonia may develop insidiously in the elderly and, particularly with resultant hypoxia and carbon dioxide narcosis, produce outstanding mental changes. Neurosyphilis, though a rarity today, must not be forgotten as a possibility. Certainly, if diagnosed early, this proves to be a treatable condition.

Trauma

The elderly individual does not always disclose a history of preceding head trauma. Likewise, in the elderly, the clinical picture of epidural or subdural hematoma is often blurred or masked, again easily passed off as due to cerebral vascular insult or senility. The presence of lethargy, waxing and waning stupor, and lateralizing neurologic signs should be sought. Where possible, skull x-rays for pineal shift, skull echogram for midline shift, brain scan, and EEG tracings may be helpful. On occasion only exploratory burr holes can settle the question.

Myeloproliferative diseases

These include particularly polycythemia vera which is usually quickly discerned on routine blood count. Less readily discerned is a rare disorder called macroglobulinemia which may be primary. This disorder and polycythemia vera cause what is called "hyperviscosity syndrome," which means that cerebral blood flow is reduced, here often in an elderly person ill equipped to tolerate this.

Malignant Disease

This may be particularly occult, if it is slow in evolution. It includes primary brain tumors, of which some of the most slowly growing ones are the least malignant and offer the best chance of surgical cure. Meningiomas, 8th nerve neuromas, pituitary adenomas, and oligodendrogliomas are among these. Metastatic brain tumors can also be occult without symptoms of the primary until later. This is particularly so for pulmonary, breast, renal, and gastrointestinal malignancies.

Exogenous toxic agents are ever with us as medications, and a variety of tranquilizers and sleeping pills. An occasional patient accumulates quite a hoard of medications from several doctors. Elderly patients may become forgetful and take extra doses, and there is always a small percentage of drug-dependent individuals who will take medication surreptitiously. Besides alcohol, the common offenders among the elderly today include barbiturates; the barbiturate-containing pain relievers such as Fiorinal; Doriden, Placidyl, Quaalude, and meprobamate (Equanil or Miltown). Valium, Librium, and Serax may also be suspect. An occasional patient derives considerable tranquility from taking large doses of cough syrup which contain tranquilizers or even codeine. Bromides are still available without prescription.

Collagen diseases which may affect the elderly are particularly systemic lupus erythematosus and temporal arteritis. Concerning systemic arteritis lupus erythematosus, one should inquire about other system symptoms, particularly arthralgias, skin disorders, and pleurisy. Temporal arteritis does not always reveal itself with a precisely located temporal pain and the swollen, inflamed, temporal artery. In some patients this arteritis takes the form of **polymyalgia rheumatica** with diffuse proximal limb, neck, and trunk muscular aching. The main clue to be sought is an elevated sedimentation rate. There may be additional corroboration with an elevated serum alpha-2 globulin, elevated plasma fibrinogen, and a positive biopsy of the temporal artery if one is fortunate enough to obtain a diseased segment. The acute risk with temporal arteritis is that the retinal vessels may become occluded with loss of vision, and occasionally even cerebral vessels may undergo infarction. As with many collagen diseases, response to prednisone therapy is often remarkable.

System failure, particularly renal, hepatic or pulmonary, occasionally even myocardial, must be considered in the elderly patient. A BUN and renal clearance studies are easily done. Occasionally, considerable obstructive uropathy from prostatic hypertrophy is tolerated excessively long by the elderly. Hepatic insufficiency results in lethargy, mental confusion, and even stupor. Pulmonary insufficiency may precede insidious states of hypoxia and carbon monoxide narcosis.

Low pressure hydrocephalus is a relatively new clinical-pathological entity discerned particularly in the last decade. It appears to be caused by stenosis or occlusion at the cerebral aqueduct of Sylvius. Occasionally, a prior history of intracranial bleeding or trauma can be obtained to account for this, often not. The clinical picture is that of decreased psychomotor activity, a subdued mental state, at times lethargy, and general mental slowness with gradual appearance of dementia. A peculiar gait disturbance also appears, sometimes confused with cerebellar ataxia or Parkinsonism. The diagnosis of this condition requires technical procedures, particularly a pneumoencephalogram (which discloses dilated ventricles without cortical atrophy) and studies of radioiodine (in serum albumin) uptake after its injection into the lumbar sac. The mentality of many of these patients can be saved by neurosurgical means of providing shunt drainage.

Depressed mental states may be confused with dementia, particularly if the patient has a great deal of psychomotor retardation, psychotic coloring, irritability, or aversiveness. In these states, it is difficult to be sure about his recent memory or orientation. One must then go more on his actions than his words. Does he behave as if he does not remember, or as if he were confused or disoriented? Is he incontinent? Sometimes the differential diagnosis requires all of the clinical skill of a psychiatrist. Depressive psychoses are very treatable and it would be tragic to let such run on, even to incur the risk of suicide, or to let the patient remain in anguish for months.

Some Helpful Hints in Diagnosing and Treating Infectious Mononucleosis

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THE University of Nebraska Health Service Clinic and Hospital treat approximately 250 to 300 cases of infectious mononucleosis annually. From that volume of cases yearly over a course of years it becomes possible to view the disease in all of its devious manifestations. With that experience it also becomes possible to develop certain helpful hints in diagnosis and treatment, and it is these that are to be presented here.

Diagnosis

Infectious mononucleosis is a viral disease of the reticuloendothelial system. Evidence is mounting that the sole causative agent is herpes virus EB-2. This evidence is so strong now that it is almost irrefutable.[1] Being a disease of the RE system, and RE cells being ubiquitous in the body, it is not at all surprising that its manifestations are protean. Syphilis used to be called the great imitator. This dubious distinction now belongs to infectious mononucleosis, and with it, compounded problems for the physician in diagnosis. Of little help is the current practice of patients in this medically affluent society to appear at the doctor's office at the earliest sign of illness, hoping for, and in many instances, demanding prompt diagnosis and cure. This is particularly true in the university environment where pressures of academic work and extracurricular activity vie with illness for the patient's body and soul. Some of the following hints may help to preserve the patient's image of the doctor while the true diagnosis is being determined and proper treatment instituted.

Symptoms and Signs: The traditional symptoms of inordinate fatigue, sore throat, fever, tonsillitis alba, malaise, and fetor oris, anterior and posterior lymphadenopathy, splenomegaly and hepatomegaly, periorbital edema, cough, headache, and possibly rash are so well known that they hardly need reiteration. Reference to some of them, however, might point out pitfalls, which can be avoided.

Fatigue: If a patient in the adolescent age complains of marked fatigue, always suspect IM until disproved. Cases have been followed for over a month with slowly developing mononucleosis in which the only complaint was fatigue. The best explanation for such a slow onset is a particularly competent patient defense mechanism. Usually, however, the onset is quite abrupt and is not confusing. The best way to elicit the needed information is simply to ask the patient how he feels in general. Strangely enough, even the severe bacterial tonsillitis cases will often admit to not feeling too bad. Not so the mono cases!

Fever: This symptom or sign is of little or no help. Do not let its presence or absence affect your thinking.

Tonsillitis Alba and Fetor Oris: When the tonsillar exudate is creamy white think first of IM, last of bacterial tonsillitis. Often a membrane reminiscent of diphtheria appears. Obviously that disease must be ruled out in such instances, but in the adolescent age group think first of IM. The peculiar putrefactive fetor oris that goes with mono never escapes the senses of the physician who deals commonly with this disease. Watch, or rather smell, for it. It is usually inescapable.

Lymphadenopathy: Anterior cervical gland enlargement is common in many types of pharyngeal infections, but posterior cervical lymphadenopathy restricts the diagnosis to measles or IM, once blood dyscrasias or local causes have been eliminated. Occasionally a "lymphatic" individual, often a natural blond, will appear, one whose glands swell everywhere at the slightest provocation.

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It is of little use to palpate the other accessible glands if malignancy and local causes have been ruled out. Incidentally, to our knowledge, suppuration of these glands, regardless of their size, does not occur.

Splenomegaly and Hepatomegaly: These major visceral organs, being a part of the RE system, are always involved but not always palpable. Palpate gently, and only once. The primary cause of fatality in IM is ruptured spleen, and the literature records one ruptured by an overzealous physician.[2]

Hepatitis: Liver involvement of some degree occurs in essentially 100% of the cases of infectious mononucleosis. Although needle biopsy has shown some parenchymal disease, the predominent involvement is in the interstitial or structural elements.[3] It is there that the RE cells reside. This is helpful since you can assure the patient on several counts: (1) It is not infectious hepatitis, (2) Complete recovery occurs rapidly without residual, (3) Gamma globulin for the patient or his contacts is *not* necessary. There is little point in burdening the usual patient with a series of liver function tests. These would be of little help other than to demonstrate the attending physician's brilliance. Of course, if frank jaundice supervenes (less than 5% of the cases) such laboratory control is necessary as a guide to recovery. Properly treated, even a jaundiced IM hepatitis case should expect to be back to full activity in 10 to 14 days.

Periorbital Edema: Periorbital edema in the adolescent patient is first IM, second glomerulonephritis. Surprising? Yet we have seen numerous cases in which the patient was subjected to extensive renal investigation and treated for nephritis when the true diagnosis was infectious mononucleosis. This is not too surprising when it is understood that the periorbital edema is associated temperally with an episode of sore throat. Adding to the confusion is the fact that cellular elements can be found in the urine (even RBC's), during the acute phase of infectious mononucleosis, especially if the specimen is centrifuged. But beware! Don't tag the patient for life with a diagnosis of glomerulonephritis if the B.P. is normal, if there is little or no albumin in the urine and if the differential heterophile or "Monotest" reveals infectious mononucleosis. If such be the case, careful watching will reveal that the signs of "nephritis" fade away with recovery from the infectious mononucleosis and no amount of renal function testing will reveal a damaged glomerular filtration system.

Canker Sores: Since many aphthous ulcers are caused by herpes virus, it is not surprising that this disease precedes, is associated with, or, follows infectious mononucleosis. Knowledge of this will save some embarrassment.

Palatine Petechiae: In the adolescent, presence of palatine petechiae herald infectious mononucleosis or 3-day measles. In our experience, it has never been otherwise. Although not present in all cases, it is too common to be ignored as an important diagnostic sign.

Rash: In 1963, our city was beset by a peculiar disease of young adolescents variously diagnosed as scarlatina. The morbilliform rash on chest and abdomen, however, along with a mono-type blood count and absence of type A beta hemolytic streptococci in throat cultures, led away from this diagnosis eventually toward that of infectious mononucleosis. In this one year, for some reason, we experienced a rash-associated mono. This sign is reportedly present in about 5% of cases.[4]

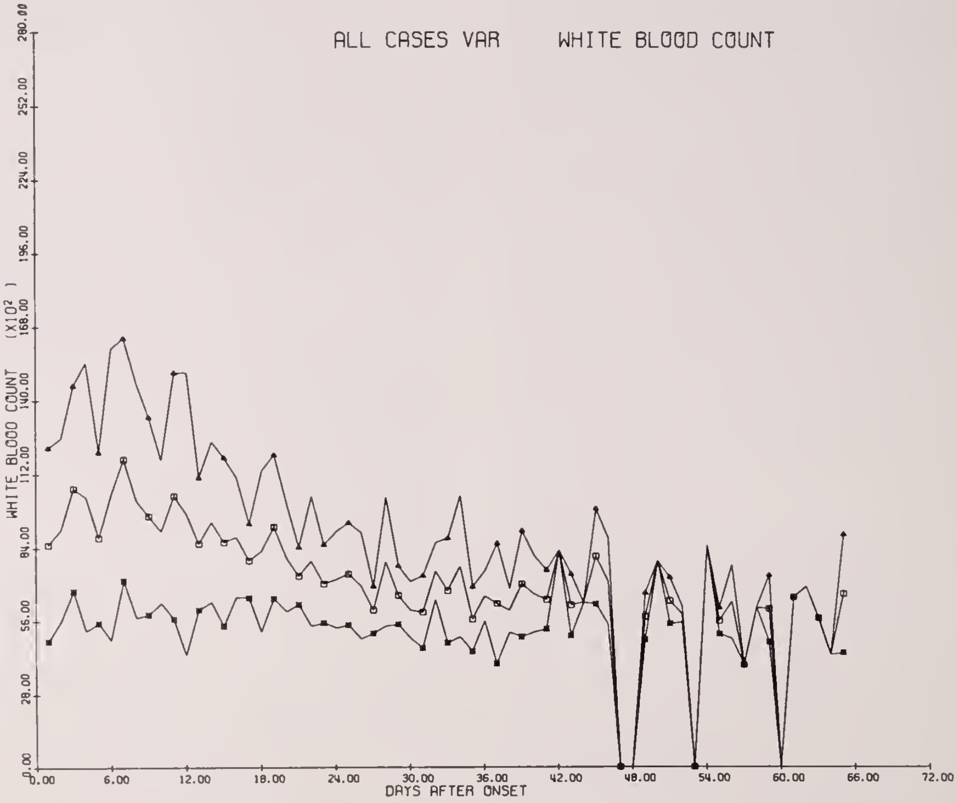
Differential Blood Count: In a series of 169 cases followed during the entire course of their disease at weekly intervals, it was found that the initial total WBC (Fig. 1) and differential (Fig. 2) varied widely. Thus, an initial total count of 21,000 of which 85% are of the PMN series gives no valid assurance that two days later the count may not be 3,000 with 85% lymphocytes. To make a diagnosis of bacterial tonsillitis on the basis of a typical bacterial infection-type count in the presence of palatine petechaie, tonsillitis alba, fetor oris, posterior cervical lymphadenopathy, periorbital edema, or splenamegaly is a trap. One case is recalled in which this was done. Four days of intramuscular penicillin and three days of oral tetracycline were of no avail. Finally the "right" antibiotic was found in erythromycin, three days of which "cured" the tonsillitis. The cost to this patient in physician fees and antibiotic costs was $85.00 and 2 weeks from school. The disease was infectious mononucleosis and time was the cure.

There are some hints. If leukopenia exists, suspect some viral disease, most always IM in the young adult. We have recorded a low of 1200 in which the cause was *not* medication; only virus involvement. (More later under complications). If leukocytosis exists, even in the presence of a left shift, but if other signs suggest infectious mononucleosis, re-examine after 2 to 3 days of antibiotic treatment. The true diagnosis should then be apparent. If the total count is within normal range, the likelihood of bacterial tonsillitis is not great. If the differential does not show well over 50% lymphocytes, re-examine after two days of symptomatic care. The diagnosis will then be apparent. Often a non-mono pharyngitis will be well on the way to recovery, and without resort to antibiotics. Learn to identify Downey or atypical lymphocytes. They must be present in IM, but may not in other viral diseases.

Slide Test vs. Heterophile: The heterophile test without differential absorption with guinea pig and beef antigen is not very helpful. It requires fresh sheep cells and 24 hours time. The slide tests available on the market are more accurate. This was demonstrated in a two-year study accomplished by the USPHS-CDC in association with 26 universities across the nation including the University of Nebraska at Lincoln. We believe the differential Monospot^R test to be the most accurate, but Monotest^R and others are so close in accuracy that the decision of which to use is really a question of individual choice. Any can be done rapidly in the physician's office at small cost to the patient, and should be in every office serving adolescents.

The test may not be positive until the 10th-14th day of the disease, but is usually positive by the 5th to 7th day. Rarely is it delayed for a month. This fact, of course, dic-

Figure 1



TOTAL WHITE CELL COUNT CHANGE DURING COURSE OF INFECTIOUS MONONUCLEOSIS*
*—Computer printout of mean and one SD — 552 specimens from 167 patients.

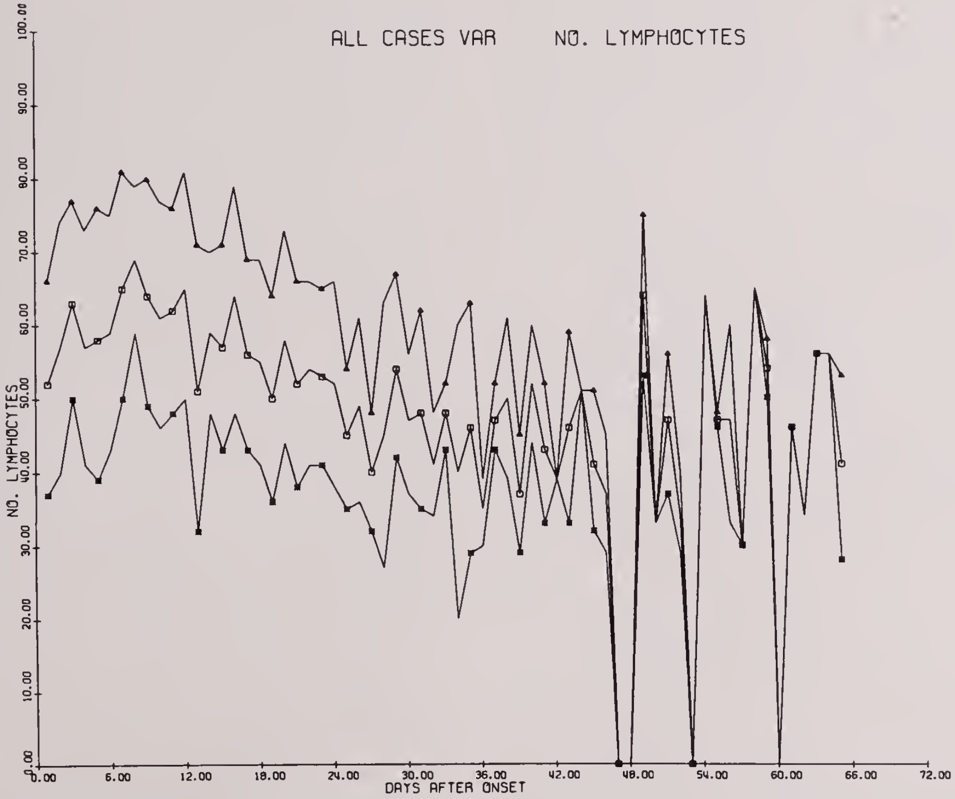
tates retesting in a few days should the initial test be negative, or equivocal and other signs suggest infectious mononucleosis.

Non-I.M. Lyphocytosis: Two diseases not uncommon to young adults, but often times not recognized, are cytomegalovirus disease and toxoplasmosis. Both have a peripheral blood differential not unlike infectious mononucleosis. Toxoplasmosis will not stimulate infectious mononucleosis antibodies and the usual tests will be negative. It can be diagnosed by demonstrating increasing titres of toxoplasmin antibodies. CMV is difficult to diagnose. CDC at Atlanta, Georgia will do a CMV titre but not on a routine basis. Unfortunately, one case of CMV with positive Monospot^{R} and heterophile antibodies has been seen. This unusual female patient had a bonafide case of infectious mononucleosis at an eastern school five years previous. She was treated and recovered promptly, was asymptomatic until onset of the current disease, but developed an infectious mononucleosis pattern with typical blood findings. Her EB-2 virus titre was low but her CMV titre was quite elevated. Immunoglobulin studies revealed some elevation of certain fractions, but no evidence of deficiency. Apparently her first disease was typical infectious mononucleosis but the second was CMV.

Complications

Bone Marrow: It is not uncommon for signs of apparent bone marrow depression to appear. When total circulating WBC counts are analyzed, the frequently seen leukopenia is usually the result of neutrophile depression, and the associated lymphocytosis is only relative, not actual. In the absence of infectious mononucleosis antibodies and traditional Downey cells, one must conclude the cause is a substance, viral or otherwise, toxic to leukopoesis, not related to IM. Many viral leukopenias are typical infectious mononucleosis, however. Our case records reveal two in the past year whose total WBC declined to 1200/ml and one several years ago whose entire hemopoetic system was involved. Platelets were reduced to below 10,000/ml causing spontaneous ecchymosis

Figure 2



LYMPHOCYTE COUNT IN INFECTIOUS MONONUCLEOSIS DURING COURSE OF DISEASE*
*—Computer printout of mean and one SD — 552 specimens from 167 patients.

and microscopic hematuria. Hemoglobin fell to 5.0 grams/100 ml and red cells count to 1,800,000/ml. A total white cell count of 1,500 was attended by a differential of 98% lymphocytes and 2% neutrophiles. The differential heterophile test was strongly positive and the physical findings were typical for IM. The patient had been on two days of Altafur^R for staphylococcus furunculosis. This drug was called off the market on the day she entered the hospital. A drug reaction was considered in view of previous reports of PAS-related IM syndrome,[5] but could not be proved. The patient was treated with a glucocorticoid with prompt recovery. We have seen several syndromes of this nature since, but none quite so severe nor related to specific drugs. In treating the infectious mononucleosis patient, it is well to be aware that such bone marrow depression can occur, apparently dissociated from medication reactions.

Ampicillin Rash: A not uncommon complication is a toxic erythema, or drug eruption, appearing on the average about one week after ampicillin is administered. This is generalized, pruritic and macular in our experience, not unlike rubella. The palms and soles may be involved, but we have not seen it on mucous membranes. Others have reported urticarial, scarlatiniform, and even erythema multiforme types.[6] The patient usually comes to the physician complaining of sore throat and fever. Findings are those of tonsillitis. Not infrequently a Monotest^R is done and found to be negative. Unfortunately, it is early in the disease, bacterial tonsillitis is suspected and ampicillin is prescribed. One week later the patient not only has arrived at the peak of his IM symptoms, but he now has the added burden of a very severe toxic rash. The answer is obvious, never use ampicillin if there is the remotest possibility of infectious mononucleosis.

Myocarditis: Rarely myocarditis will develop. It is signaled by tachycardia, chest pain, elevated LDH and SGOT, and an elevated sedimentation rate. The ECG will show nonspecific ST-T changes. ASOT and CRP are negative and the signs and laboratory evidence for IM are present. It is well to follow the vital signs of an IM case under treatment so that this complication will not be missed. We have already seen three this past year, but this is unusual.

Encephalitis: The central nervous system is not immune to EB-2 Herpes attack. Gullain-Barre' syndrome has been reported, but we have not recorded a case. Thus, the incidence must be quite low. However, IM viral encephalitis is not rare and a year does not go by without one being treated at the Student Health Hospital. The symptoms are predominantly those of severe headache and spiking fever. Early management prior to confirmation of the etiology may be difficult. One case is recalled whose fever spiked daily to over 104° for seven days prior to positive confirmation. The patient felt fairly comfortable in between fever peaks, and the rising lymphocyte count gave some scanty confidence that the disease was, in fact, infectious mononucleosis. However, a spinal tap was accomplished on the sixth day only to find it to be essentially normal with the exception of 0-3 lymphocytes/HPF. On the seventh day the absorbed heterophile became definitely positive, the ultimate titre being over 1:7000. The patient recovered with only symptomatic care.

Relationship to Leukemia: One of the greatest fears in the mind of the patient, his relatives and often the physician, is whether this case of infectious mononucleosis will "turn into leukemia." In spite of a recent report in JAMA[7] concerning leukemia in IM patients (all were pediatric patients) and the known relationship between herpes EB-2 and Burkitt's lymphoma, this metamorphosis does not occur. There were 350 college health physicians, pathologists and hemotologists at the International Infectious Mononucleosis Symposium in Washington, D.C. in the spring of 1967. Some had seen as many as 5,000 patients with IM. Altogether approximately 350,000 cases of infectious mononucleosis were represented. In only one instance was there a reported incident of leukemia in a patient with IM, but under close scrutiny the diagnosis of IM could not be supported.[2] The heterophile was 1:56 at maximum, unabsorbed, and other important diagnostic criteria were absent. This mass of statistics seems to suggest that the infectious mononucleosis - leukemia relationship is a chimera. The physician and the general population should be assured of this fact.

Management

Bed Rest: We tolerate complete bed rest until the temperature is normal for one day. To cling to the old concept of prolonged bed rest is medieval, and in our clientele is deadly. It only results in complete deconditioning with its attending prolonged fatigue, orthostatic hypotension and invalidism. To prescribe that for a college student is to commit him to loss of an entire semester. If he is in a sequential study program, this often means an entire functional year. Thus, we are committed to early ambulation.

Like most disease entities, severity of the individual case runs the gamut from light (lasting two weeks *in toto)* to severe, lasting two weeks acutely ill and four weeks convalescent) to chronic or unresolved (from 4-6 months up to 2½ years). Statistics are not at hand to give an accurate assessment, but the percentages are approximately 50%, 40%, and 10%.

Light Cases: These are treated by establishing the diagnosis, giving symptomatic medications such as ASA and hot salt gargles, and a strict admonition to eight to nine hours sleep at night. Other than that, patients are permitted to carry on a normal life except for no contact sports for two weeks (to protect the spleen). We insist on follow-up to be assured the patient fully recovers, even to hemotological normalcy.

Severe Cases: Glucocorticoids are almost universally prescribed. A good, standard routine consists of 40 mg prednisolone three days, 20 mg three days, 15 mg three days, 10 mg three days and 5 mg three days. The first five to seven days are covered by antibiotic (preferably one not detoxified in the liver, but *not* ampicillin). Adequate night rest is insisted upon. If the patient is febrile, bed rest in the clinical hospital or at home is mandatory until the temperature curve is flat for 24 hours. This is followed by 24 hours ambulation and then a trial at classes. If progress is not reversed, the patient is released for ambulatory outpatient care. It is extremely rare that over five days hospitalization is required and it is usually less. Thus, the patient loses little if any activity and does not become deconditioned. Convalescence is not prolonged.

Follow-up is mandatory. The patient is seen four days after initiation of therapy or daily if in the hospital, then at weekly intervals unless continued progress indicates desirability of longer intervals between visits. At each visit a WBC and differential are done to monitor recovery. An early drop in lymphocytosis is expected in those on steroids. As dosage decreases, the count again rises, only to fall again over the normal convalescent time of six weeks. A moderate eosinophilia frequently appears at this time. By the end of six weeks the count is usually normal. The patient may complain of some fatigue for the first week, but this disappears with continued activity. Handled in this way, the disease loses most of its fear for the student. He sees rapidly that he is not going to lose stride with school. Unfortunately, there are some who use this disease as an excuse for nonproduction. This cannot be helped and one can only sympathize and try to help.

Slowly Resolving Cases: About 10% of all cases resolve slowly, the time to hematological recovery extending usually to four to six months although we have bonafied recorded cases of 2½ and over 3 years. Exacerbations occur in these cases when resistance is low. This gives rise to the erroneous belief that one can have IM more than once. Only time and reduced activity can bring about cure. These patients are usually male self-drivers with a life style which precludes attention to bodily needs. They expect their bodies to respond to their demands, and they give it no quarter. One must understand, sympathize with, and make them to know the real reason for the delayed recovery. They are often doctor-shoppers and consume quantities of vitamins. Eventually their bodily resources overcome the last of the virus particles and they recover, having lost an enormous amount of time and efficiency in the process.

Prognosis

Once a person recovers from infectious mononucleosis, he has conferred upon himself permanent immunity. He will not get mono again. He may get a sore throat and swollen glands, but it will not be IM. It was the concensus of the physicians gathered at the International Infectious Mononucleosis Symposium that there is less likelihood of contracting a second case of IM than there is of getting measles, mumps, chicken pox, etc., a second time.[2] Later studies by CDC and others have shown that a permanent EB-2 titre attends recovery from IM. Thus, the patient can be assured of permanent immunity, once the disease process has been overcome.

One last comment. Since this has been called the "kissing disease,"[4] the patient and his associates wish to know two things. (1) How long am I contagious? i.e., When can I kiss my girl again? (2) Can I transmit it to my roommate or family? These are answered as follows:

1. The epidemiology of EB-2 is in the process of study now and an exact answer to this question may be forthcoming. Until it is, a good rule of thumb is to consider the case infectious while the tonsils or throat are still inflamed and purulent. This is roughly seven to ten days. Not uncommonly we encounter the anachromism of an associate, or more commonly a parent, who has the bizarre concept that this disease is venereal. These people require special handling and longer periods of noncontact are indicated.

2. To answer this truthfully, one needs to know who the roommate is and how well they get along. Hoagland studied 500 consecutive cases of acute infectious mononucleosis in West Point Academy students living in close quarters and treated in quarters.[4] He recorded not a single case of transmission between roommates. If the usual amenities of personal and public health are observed, including not expectorating in the wash basin, etc., there need be no fear for person to person transfer unless there intervenes intimate contact. Thus, we never isolate IM cases.

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Minimal Cerebral Dysfunction

W. G. BURROWS, M.D.*

THIS syndrome, or clinical conditions very similar to what is usually described under the rubric of "minimal cerebral dysfunction," would appear to have been exciting the attention of clinicians for some time. True, there seems to be little agreement as to exactly what constitutes the syndrome; the clinical picture has been described by such names as "hyperkinetic syndrome;" "hyperkinetic impulse disorders;" "Strauss's syndrome;" in any event the condition seems to have been described in the literature initially by Kramer and Polnow[1] in Germany in 1932. In this country, Bender[2] and Bradley[3] have written extensively about it and described its treatment by means of the amphetamines in 1942.

Many authorities have been preoccupied with the diagnosis and treatment of the condition. Stella Chess[4], in describing the "hy-

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peractive child," lists it as one of the five categories under the heading of "physiologic hyperactivity;" the other categories referred to are:

1. organic brain damage
2. mental retardation without obvious brain damage
3. reactive and neurotic behavior disorders
4. childhood schizophrenia

Chess felt that the major diagnostic characteristic of physiologic hyperactivity was hyperkinesis, not associated with other pathology, but leading to secondary disturbances of psychodynamic significance. She mentioned that the associated symptomatology varies with the age of the child. For instance, in the two to five year old group, the associated symptoms usually include:

1. sleep problems,
2. nonconformity to limit setting,
3. unprovoked aggressiveness, and
4. impulsiveness.

In the six to twelve age group, however, associated symptomatology usually includes:

1. short attention span,
2. nonconformity to limit setting,
3. play disturbances,
4. disruptive school behavior.

Many authorities have referred to a high instance of abnormal EEG patterns and also the presence of concomitant equivocal or "soft" neurological signs.

Clements and Peters[5] characterize the syndrome by the following:

1. hyperkinesis,
2. impulsivity,
3. emotional lability
4. short attention span and/or distractability,
5. specific learning defects,
6. perceptual motor defects,
7. coordination defects,
8. equivocal neurological signs,
9. borderline abnormal or frankly abnormal EEG.

Slater and Roth[6] of Great Britain, in describing the condition, mention in their sample the high percentage of epileptics encountered, especially patients suffering from temporal lobe epilepsy.

No definite cerebral pathology has yet been isolated to account for this peculiar syndrome, but it should be pointed out that, untreated, the effects on both the child and the family can be disastrous. Occurring as it does in the age of what may well be maximal learning, e.g. between three and twelve years of age, this condition, if untreated, can result in the child's acquiring tremendous deficits in learning, which can never be made up. Secondly, from a psychodynamic point of view, a child suffering from this condition can wreak such havoc in the intrafamilial relationships that the parents and other siblings literally come to hate him, with the development of concomitant family pathology and psychiatric disorder in other members of the family. Treating the child, therefore, may salvage a sick human being, the patient; it can also prevent the development of psychopathology in other family members.

The management of the child, and his family, can constitute a difficult therapeutic challenge; the approach combines psychotherapy and psychopharmacology. The psychotherapeutic regimen encompasses words with parents and, frequently, teachers, to help them to understand and accept the child with non-punitive attitudes; psychotherapy with the child alone is rarely of value since the child is too "driven" to benefit from it. Chess recommends medication (1) when the hyperkinesis is so great that it is impossible to institute a meaningful psychotherapeutic regimen; (2) when the child's education is disrupted, and (3) when sleep disturbance on the part of the child produces excessive fatigue in either child or parents.

This presentation is concerned primarily with the use of the antidepressive drugs; other drugs have been used with some success. These include the following:

1. Major tranquilizers: (a) chlorpromazine, in divided doses of 200-500 mgm per day advocated by Slater and Roth; (b) thioridazine in divided doses of 75-100 mgm daily has been recommended by Peters.
2. Anticonvulsants: (a) primadone 125 mgm daily (in divided doses) may, according to Slater and Roth, be of use in some cases; (b) some physicians report that Dilantin sodium has a therapeutic effect on this type of behavior problem. Some prominence has been given to this drug in the lay press in recent months, but in this writer's experience, it has been found to be disappointing.

Antidepressants may be divided into the following major categories:

I. Tricyclics (imipramine, amitryptiline, nortryptiline, protryptiline).
II. Monoamine oxidase inhibitors (hydrazines and non-hydrazines).
III. The amphetamines, particularly dextroamphetamine — here used for its paradoxical effect.
IV. Methylphenidate
V. Deanol acidaminobenzate
VI. Pipradrol

In my own practice with children who present with this clinical condition, I have found it of value to institute a clinical trial of either amphetamine or methylphenidate. I have found that amphetamine tends to be somewhat more anorexic than methylphenidate, and if the child has a poor appetite, I am more inclined to use methylphenidate. Similarly, if the child should be so anorexic as to be debilitated, I would be inclined to use deanol acidamidobenzoate, though various authorities have had conflicting responses to this drug; Kugel at the University of Nebraska College of Medicine has reported little if any effect from it. It is my practice to start the child usually on ten mgm of dextroamphetamine daily in two doses, giving five mgm before breakfast and five after lunch. I employ the same dosage schedule for methylphenidate. This may, in certain cases, result in dramatic effects. If there is no improvement in the child's behavior after 48 hours, increase the dosage by five mgm, giving the afternoon dose earlier if the child tends to show signs of insomnia. If, after a further 48 hours there is no response, I switch to methylphenidate, starting at 10 mgm daily, and, if necessary, increasing the dose. I have, on occasion, used up to 40 mgm daily. In my experience, if no beneficial effect is experienced within two weeks, no effect can be expected and the drug should be discontinued.

It has recently been reported that amitryptiline in 10 to 25 mgm doses b.i.d. has been employed by some clinicians, but I have not yet seen clinical evaluations of its efficacy.

Several points should be made in conclusion, particularly in view of the current drug abuse situation. The first is that amphetamine and/or methylphenidate are used here for their paradoxical effect rather than as cortical stimulants, and do not seem to be habituating in children under 10 or 12 years. In my experience, it is quite safe to give them over long periods of time, but when a child is reaching 10 or 12 years of age, if any signs of stimulation appear, or the development of insomnia or a decrease in appetite, it may well be wise to discontinue the use of the medication. Side effects, however, seem to be much less frequent in children than in adults: it is worth mentioning that children, as a rule, seem to tolerate higher doses of the psychopharmacologicals than adults, both as regards therapeutic effects and the side effects. Finally, it must be pointed out that many children, with or without treatment, will outgrow this syndrome by the time they are 10 or 12 years old. But if untreated, they will by this time have acquired such tremendous learning gaps that they will never be able to make them up; and the psychodynamic effects of such a child within the family structure may produce irreparable personality damage to the child, as well as to other family members. In view of this tendency to outgrow the condition, one might ask whether or not it simply represents a delay in cerebral development. Finally, the child under treatment should have medication stopped, beginning on a trial basis, any time after 10 years of age to determine whether or not the need for medication still exists.

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Congenital Heart Disease in Children*

Congenital Heart Disease in Children

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THE physician rendering primary care has a significant role to play in the management of children with congenital heart disease. He decides when a child should be referred to a pediatric cardiologist or center for definitive diagnostic tests and reviews their recommendations with the parents in order to implement an optimal therapeutic regimen. This necessitates a background of basic physiology and the diagnostic features of the common congenital cardiac lesions, as well as current knowledge of the natural history and results of surgical intervention. His role should be active rather than passive.

The most common lesions seen in older children include ventricular and atrial septal defects, (VSD, ASD) patent ductus arteriousus (PDA) pulmonic stenosis with intact septum, tetralogy by Fallot, coarctation of the aorta and aortic stenosis. More complicated lesions are rare, and management has usually begun in infancy.

It is convenient to categorize into severity groups dependent upon the natural history and results of surgery; e.g. mild (excellent prognosis, surgery not required), moderate (expert opinions differ, surgery dependent upon evaluation of patient's general status), severe (surgery definitely indicated), inoperable (surgical mortality unacceptable).

Some lesions result in an increased volume of blood presented to the ventricle resulting in "volume work" (VSD, ASD, PDA) while in others, the ventricle must perform increased "pressure" work to overcome resistance (pulmonic or aortic stenosis, coarctation of aorta, left to right shunts complicated by pulmonary vascular obstructive disease).

Ventricular Septal Defect

Typical findings in VSD include a thrill in the fourth left interspace and a loud, rough, holosystolic murmur in that area. The natural history of this defect varies with the severity of the hemodynamic abnormality. The clinical course is dependent on the magnitude of pulmonary blood flow and reactivity of the pulmonary vascular bed. The severity of the defects are Classified in Table 1.

Indications for early cardiac catheterization are exercise intolerance, cardiac enlarge-

Table 1
VENTRICULAR SEPTAL DEFECTS
SEVERITY CLASSIFICATION

	Qp / Qs		Pp / Ps
Mild	<1.5	-	<0.5
Moderate	1.4-2.2		<0.5
Severe	>2.2	-	>0.5
Inoperable	<1.5	-	1 0

Qp = Pulmonary Blood Flow
Qs = Systemic Blood Flow
Pp = Pulmonary Artery Pressure
Ps = Systemic Blood Pressure

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*Prepared by the Nebraska Heart Association for this Journal.

ment, congestive heart failure, or evidence of right ventricular enlargement. If none of these problems is present, diagnostic studies are done electively after five years of age. Surgery is curative unless the defect is incompletely closed, or heart block is induced.

Atrial Septal Defect

Classical findings in atrial septal defect are a parasternal impact, an ejection systolic murmur at the second left interspace, a widely split fixed S_2, and ECG evidence of right ventricular enlargement or rR′ pattern in the right precordial leads with roentgen evidence of cardiamegaly and increased pulmonary vascular markings. Surgery is indicated unless the defect is very small and the ratio of pulmonic to systemic blood flow is less than 1.5, or severe pulmonary vascular obstruction has resulted in a right to left shunt with cyanosis. Surgical mortality in operable patients is less than one percent, and the result is curative.

Patent Ductus Arteriosus

Patent ductus arteriosus is characterized by a crescendo systolic-decrescendo diastolic machinery murmur. Cardiac catheterization is indicated only if the murmur is atypical, or there is evidence of right ventricular enlargement. Surgery is indicated in symptomatic children and, electively, in all patients at about four years of age. Operative mortality is less than one percent. Correction is contraindicated if there is cyanosis due to a right-to-left shunt.

Pulmonic Stenosis

The findings in pulmonic stenosis include a thrill and a rough ejection systolic murmur in the second left interspace. The lesion is characterized as mild, if the peak systolic gradient from right ventricle to pulmonary artery is less than 50 mm Hg; and severe, if the peak systolic gradient is greater than 80 mm Hg. Gradients from 50 to 80 mm Hg are classified as being moderate. Cardiac catheterization is performed electively after five years of age and earlier if there is clinically detectable cyanosis, cardiac enlargement or ECG evidence of increasing RVE. If RV "strain" pattern is present, diagnostic study is mandatory as an emergency procedure. Operative mortality is less than one percent, and surgical correction relieves the obstruction.

Aortic Stenosis

Congenital aortic stenosis results in a thrill and ejection systolic murmur in the second right intercostal space. The obstruction may be valvar, subvalvar, or supravalvar. Severe obstruction may cause angina, syncope, electrocardiographic evidence of left ventricular strain, and even sudden death. Unfortunately, severe pressure loads on the left ventricle may occur without evidence of symptoms, abnormal ECG or chest film. Indications for diagnostic study are urgent if the clinical diagnosis is clear, and angina, syncope, cardiomegaly or a left ventricular "strain" pattern are present. In the asymptomatic child with a typical murmur and thrill, elective catheterization is indicated after five years of age.

Severity is judged as mild when the peak systolic gradient from left ventricle to aorta is less than 65 mm Hg; severe, when the peak systolic gradient is greater than 80 mm Hg, or LV "strain" pattern is present. A moderate category includes those with gradients between 65 and 80 mm Hg, and without an ECG "strain" pattern.

The operation is essentially palliative. Residual aortic stenosis is not uncommon, and late calcific aortic stenosis is common. Aortic insufficiency is not a rare complication, but if mild, may be tolerated well through childhood and adolescence. Ultimate valve replacement may be necessary.

Coarctation of the Aorta

Coarctation of the aorta is diagnosed on clinical grounds, by the presence of a differential in blood pressure between the upper and lower extremities. Cardiac catheterization is not indicated unless there is a complicating lesion. Indication for early surgery is the presence of severe hypertension, or ECG evidence of left ventricular enlargement. Otherwise, correction should be performed electively between six and twelve years of age. The result is curative.

Tetralogy of Fallot

Tetralogy of Fallot is characterized by a large ventricular septal defect and varying degrees of right ventricular outflow obstruction resulting in RV pressures at or near systemic levels and cyanosis due to right-to-left shunting through the septal defect. The outstanding symptom is decreased exercise tolerance. Sudden decreases in arterial oxygen saturation result in hypoxic spells (increased cyanosis, irritability, and air hunger) and may be lethal. Cardiac catheterization to delineate the anatomy is indicated in all patients in whom surgery is contemplated. Two types of surgical approach are available: palliative shunting procedures, or intracardiac repair with closure of the septal defect and relief of outflow tract obstruction.

If the patient is severely symptomatic before the age of five years, a shunting procedure is indicated. Intracardiac repair is indicated in the severely symptomatic child over five years of age, and electively after eight years of age. Palliative shunting procedures in children over five years of age have a low mortality rate and those with good results usually remain satisfactory for 5 to 10 years. Intracardiac repair has been associated with a diminishing mortality rate that is now 7 to 10 percent in many large centers. The long term results are most promising. Five and ten year follow-ups have been excellent in those in whom adequate repair has been achieved.

President's Page

The fall session of the NSMA House of Delegates, just completed last month, demonstrated the multiple areas of involvement of organized medicine today. Physicians today are involved in most, if not all, aspects of life in America; social, economic, health, political, moral, and so on. Each of these areas presents many controversial issues, and I believe we can take pride in our efforts to ease the pressures in all these areas. Our Nebraska physicians regularly devote countless hours as well as their unique talents to ensure continuation of free enterprise medicine in a free nation. So far, we have been successful while providing our patients with the highest scientific level of medical care.

The controversial interest in the issues facing medicine today may sometimes create the impression of "a house divided against itself." Any indication of this attitude among the public-at-large would be erroneous; among physicians it could be disastrous. The multiple philosophies held by our members are probably the greatest asset organized medicine has for developing sound programs and principles.

All of my training as a physician tells me that real and serious problems are solved only by facing them openly and with frankness. No progress can be made by turning our backs, the issues will not solve themselves and there is always the pressure of governmental control for those problems we would ignore. I believe Nebraska physicians have faced the issues. I believe they have voiced a willingness to shoulder responsibility, and I believe we have developed a sound policy for these results can only stem from constructive criticism — not divisive controversy.

Roger Mason, M.D., President,
Nebr. State Medical Association

WashingtoNotes

Prepaid group medical service

Health, Education and Welfare Secretary Elliot L. Richardson approved a proposed regulation to authorize insurance carriers to issue contracts for prepaid group medical service to persons in any state regardless of any restrictive state law.

Forty-one prime health insurance carriers presently provide coverage through FEHBP. The actual number of insurance carriers affected by the law could total in the hundreds because of reinsurance contracts between prime carriers and other insurance providers, according to a spokesman for the department's Office of Group Practice Developments.

HEW said as many as 50 million residents of the 20 states with laws restricting group practice could become eligible for group health plans.

Such plans, as described in the proposed rules, offer preventive, diagnostic and therapeutic medical services in a single organization on a prepaid basis.

"A medical group . . . shall include at least a general practitioner and representatives of each of the following medical specialties: general surgery, obstetrics, internal medicine, pediatrics and ear-nose-throat," the proposal said.

Cancer

The American Medical Association told Congress that the attack on cancer can be most effectively conducted through the National Cancer Institute within the National Institutes of Health, rather than through a separate and autonomous agency.

Other AMA presentations

Physician Shortage Areas

The AMA supported legislation that would provide federal aid to individual or small groups of physicians in establishing medical practices in rural areas, small towns and low income inner-city areas.

The legislation (S. 2269) would amend the National Housing Act to authorize mortgage insurance for the construction and rehabilitation of medical facilities for the practice of one to four physicians in physician-shortage areas. In 1966, mortgage insurance was authorized for establishment of nonprofit group practices. The current legislation would extend that program.

Dr. John M. Chenault, a member of the AMA Board of Trustees, spoke for the Association. He said, "One of the problems in our health delivery today relates to a shortage of necessary manpower, as well as the lack of proper distribution. The shortage is particularly emphasized in rural areas and areas of low income. The failure of such areas to attract physicians can be attributed to many factors — tangible and intangible — and the problem is a complex one. We should, however, provide incentives and encouragement to physicians to meet the needs of those areas.

National Institute for Health Care Delivery

The AMA questioned the desirability of establishing a National Institute for Health Care Delivery.

In a letter to Sen. J. Glenn Beall, Jr. (R.-Md.), who made the proposal and invited AMA's comment, Ernest B. Howard, M.D., AMA executive vice president, said:

"As we understand your proposal, a National Institute of Health Care Delivery would be established, for the purpose of developing improvements in health care delivery, the Institute being perhaps comparable to NIH and NASA. Through the use of "think tanks" and developmental labs, the institute would examine our existing health care system and design and test components of a new one.

"Our health delivery system is constantly responding to improvements in medicine as they are developed. These changes occur through many means — the medical schools, university and other hospitals, clinics, continuing education (both formal and informal), and community practices of all types. One of the strengths of our health care system is its pluralistic nature which can absorb and respond to changes as new medical and scientific knowledge is developed.

Military Medical School

The AMA opposed establishment of a military medical school.

Testifying before the House Armed Services Committee, Bland W. Cannon, M.D., a member of the AMA's Council of Medical Education, said:

". . . We cannot emphasize too strongly that our concern is that the men and women in our uniformed services should receive nothing less than the best in medical care. There is no reason why they should not continue to receive care from physicians trained in a medical education system which has proven itself to be unexcelled. We support an expansion and greater utilization of this system rather than the development of a new and different kind of institution . . .

"One aspect of the nation's goals for more physicians is the need of the uniformed services, and it is to this one aspect that H.R. 2 is directed. The AMA believes it is vital that the number of physicians in the uniformed services be adequate to enable them to carry out their missions, and that those physicians be thoroughly trained and competent in order that those serving our country in the uniformed services might receive the best possible medical care. However, it is doubtful that these objectives can best be realized through establishment of a separate uniformed forces medical school, as called for in H.R. 2.

"In our opinion, it would be very unwise to establish a separate medical school specifically to train physicians for the uniformed services in which all, or a significant portion, of the physicians serving in these forces would receive their medical training. We believe it is very important that the armed forces take full advantage of the resources and facilities of the existing medical schools of the United States in training their medical manpower, and that such training not be restricted in any degree to a single school established for that purpose. We also believe that it would be possible to train larger numbers of physicians in a shorter period of time, for lesser cost if the existing schools are used."

The AMA supported provisions in the legislation for helping medical students with scholarships with a requirement that they serve on active duty for a number of years after completion for the training of future military medical officers.

Despite the opposition of the AMA and the Association of American Medical Colleges the committee unanimously, 31-0, approved the bill. The legislation would authorize a medical student scholarship program of $210 million over the next five years. The military medical school would be built in the Washington area.

Intelligence and Blood Pressure in Aged — F. Wilkie, C. Eisdorfer (Center for Study of Aging and Human Development, Duke Univ Medical Center, Durham, NC 27706). Science 172:959-962 (May 28) 1971.

Diastolic hypertension was related to significant intellectual loss over a ten-year period among individuals examined in their sixties. Such loss was not found in their age peers in association with normal or mild elevations of blood pressure. Of the subjects initially examined at 70 to 79 years of age, none with hypertension completed the follow-up program, and those with normal and mildly elevated blood pressure showed some intellectual decline over the decade. At the initial examination, hypertension was related to lower intelligence test scores only among those subjects who subsequently did not complete the follow-up program. Systolic hypertension seemed to have less relation to the intellectual decline in the group of these patients.

Down Memory Lane

1. Much aid in the diagnosis of gallbladder disease is given by the pneumoperitoneal Roentgen ray.

2. To listen to these last two gentlemen talk, although I have strong views on the other side, they almost convinced me.

3. No one who had seen the thousands of shattered and crippled men could fail to be glad that the firing at the front had stopped.

4. The American College of Surgeons which fostered the propaganda against fee splitting may be able to deal with the problem of extortion in the surgical world.

5. The fact remains that the world is suffering from a shortage of nurses of any kind and that the great middle class of people cannot pay the price at present demanded by graduate nurses.

6. The student enrollment for the current school year at the Creighton University College of Medicine is 140, and at the Nebraska University College of Medicine, 257. It is understood that both colleges could have enrolled more had there been room to accommodate them.

7. The Fremont hospital cared for 704 cases during the past hospital year.

8. Whenever there is a question of the presence of cholangitis it seems safer to drain the common duct than to trust to the infection of the ducts clearing up because of their natural drainage after the offending gallbladder is out of the way.

9. I am thoroughly convinced ether is the chief cause of our mortality in belly surgery.

10. The operation was performed with such ease that in addition to the gastroduodenostomy, I removed the appendix and gallbladder, there being a marked pericholecystitis with cobweb adhesions and a chronic appendicitis.

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Stab Wounds of Abdomen: Analysis of 500 Patients — K. K. Kazarian et al (New York Medical College, New York 10029). Arch Surg 102:465-468 (May) 1971.

Since 1962 all patients with stab wounds of the abdomen admitted to New York Medical College - Metropolitan Hospital Center have been managed on a selective basis. Operation was mandatory if the patient demonstrated signs of peritoneal irritation, shock, blood in the stomach, rectum or urine, evisceration of free peritoneal air. Others were observed vigilantly under the supervision of the trauma team and explored if such signs appeared. The exploration rate has been reduced from 56% to 28% without increase in mortality and no deaths resulted from observation without surgery. Drug addiction was encountered in 26% of the patients.

Diagnosis of Acute Myocardial Infarction in Patients With Permanent Pacemakers — S. Center (637 DuPont, Miami, Fla 33131), R. A. Berger and P. Tarjan. Arch Intern Med 127:932-933 (May) 1971.

The electrocardiographic diagnosis of acute myocardial infarction in patients being paced by unipolar pacemakers has been made possible. The technique of shorting out the pacemaker is simple and can be performed repeatedly at the bedside. Two patients were clinically suspected of having acute myocardial infarction. ECGs taken in the absence of pacemaker stimulus distortion of the QRS complex confirmed the diagnosis in one patient and helped to rule out the diagnosis in the other.

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Our Medical Schools

Orthopedic closing

The University of Nebraska Medical Center will conduct two orientation sessions for employment placement of persons who will be phased out of jobs as a result of the closing of the Nebraska Orthopedic Hospital in Lincoln.

Thirty-five of the 110 employes at Nebraska Orthopedic have indicated an interest in the program.

Nebraska Orthopedic Hospital is expected to close its doors December 1 as a result of action by the Nebraska Legislature. The hospital's activities will be moved to the Medical Center campus.

James Kingsbury, assistant administrator of University Hospital, said the present average patient population at the Lincoln facility is 40. "We are predicting an increase in patients from the orthopedic transfer to 10 to 20 acute care inpatients and 20 to 25 extended care patients," Kingsbury said.

Dr. Ferraro named

Dr. Frank Ferraro, professor of medical microbiology, has been named acting chairman of that department, according to Dr. Joseph Holthaus, dean of the Creighton University School of Medicine. He succeeds Dr. Andor Szentivanyi who is leaving the University to assume a post at the University of South Florida in Tampa, Fla. Dr. Holthaus said a search committee was being formed to identify and select a permanent chairman of the department.

Dr. Ferraro, a native of Omaha, received a bachelor of science in pharmacy and master of science degrees from Creighton University and a doctorate degree in bacteriology from the University of Southern California.

He served on the faculty of the Creighton School of Pharmacy from 1946 through 1955 as an assistant professor of biological sciences and acting chairman of the department. In 1956 he joined the School of Medicine as an assistant professor of microbiology and now holds the rank of professor.

New class at U of N

One hundred six freshmen enrolled in the University of Nebraska College of Medicine last month. Thirty other freshmen began their studies at the College in July under the physician augmentation program which condenses the usual four-year course of study into three years.

The class of 136 contains 125 residents of the state of Nebraska and three foreign students. Sixteen freshmen are women and eleven are members of minority groups.

Thirty-three members of the new class are Omahans; eleven are from Lincoln.

Dr. Mary Jo Henn, chairman of the admissions committee, said the 136 were selected from 1,026 applicants. Of these 740 were nonresidents of Nebraska.

Drugs, Ob/Gyn & ER

1. A drug training institute has been added to the November schedule of the department of continuing education at the University of Nebraska Medical Center.

Co-sponsor of the institute November 11 and 12 is the Pfizer Pharmaceutical Company.

In addition to members of the department of psychiatry at the Medical Center speakers will include Dr. Jerry Edwards, professor and chairman, department of health education, Adelphi University, Garden City, New York; Dr. Samuel Irwin, professor of pharmacology, department of psychology, University of Oregon Medical School, Portland; Dr. Wendell Lipscomb, chief of research, Mendocino State Hospital, Talmage, California; Dr. Chaim Rosenberg, director, division of alcoholism, Boston City Hospital, and instructor in psychiatry, Harvard Medical School, Boston, Massachusetts; Dr. J. T. Ungerleider, associate professor of psychiatry, Neuropsychiatric Institute, University of California at Los Angeles, director of drug research and education services, and commissioner on national marihuana and drug abuse commission, Los Angeles, California.

Other speakers will include staff members from the Equilibria Clinic in Omaha, Scott Mengshol and Mike Wilson, and the clinic's director Dr. Donald Parkison. Dr. Emmet Kenney, in private practice of psychiatry in Omaha, and Joseph Cashen, Omaha attorney, will also participate.

The registration fee of $15 includes two luncheons. The course carries twelve hours of credit with the American Academy of Family Practice.

2. The annual traineeship in obstetrics and gynecology will be held on the Medical Center campus December 6-10. The course will be directed to the specific problems and interests of the five trainees. The registration fee of $125 includes five luncheons. The course carries 50 hours of credit with the American Academy of Family Practice.

Course coordinator is Dr. Joseph Scott, associate professor of obstetrics and gynecology.

3. A course on procedures and techniques of emergency room nursing will be conducted December 7 at Lutheran Hospital in Beatrice, December 8 at the Holiday Inn in North Platte, and December 9 at the Midtown Holiday Inn in Grand Island.

The course is under the direction of Dr. David Stephenson, assistant professor of surgery, and Mrs. Patricia Johnson, staff nurse in the medical intensive care unit at University Hospital.

The registration fee of $15 includes one luncheon.

The Letter Box

To the Editor:

The Maternal and Child Health Program of the University of California School of Public Health at Berkeley announces postgraduate courses of instruction for pediatricians, obstetricians, and other physicians interested in receiving training in the field of Maternal and Child Health. These programs all lead to the degree of Master of Public Health. Tax-exempt Fellowships are available, consisting of support for the trainee and his dependents, tuition and fees.

Program areas available at the present time include nine-month programs in Maternal and Child Health, Health of School-Age Children and Youth, and Maternal Health and Family Planning. Twenty-one month programs in Care of Handicapped Children, Comprehensive Health Care and Perinatology are available. Fellowships are available for these programs also.

Applications are now being accepted for the group entering September *1972*. For information, write to Helen M. Wallace, M.D., School of Public Health, University of California, Berkeley, California 94720.

Sincerely,

Helen M. Wallace, M.D.
Professor and Chairman
Maternal and Child Health Program

To the Editor:

We invite our medical colleagues to become members of our national nonprofit organization which is dedicated to furthering art interests of the medical profession to broadening the physician's knowledge and appreciation of the past and present; to stimulating physician artists to produce works of art in the fields of painting, sculpture, photography, graphic arts, design and creative crafts; to holding a national annual exhibition of physicians' art works; and to stimulating regional art exhibitions of physicians' works at local, state and specialty meetings.

Our art exhibit is held annually in conjunction with the annual meeting of the

American Medical Association. The APAA has a membership which extends across the entire United States, Canada and Latin America. Every state in the Union is represented through a Regional Director. It is the hope of the APAA to establish a central photographic archive of its members' art works, to be used for year round press and magazine publicity in the physicians' home towns as well as nationally.

You do not necessarily have to be currently engaged in any art activity to become a member. We also welcome the support of anyone interested in furthering physicians' art in America, as our organization is totally supported by the members and friends of the APAA. The types of membership are:

Life Sponsor Membership	$200.00
Sponsor Membership	30.00
Regular Membership	15.00
*Associate Membership	5.00

*Associate Membership is for medical students, interns, and residents.

A. M. Gottlieb, M.D.,
President, APAA
3801 Miranda Ave.
Palo Alto, Calif. 94304

Books

General Ophthalmology, by Daniel Vaughan, M.D.; Taylor Asbury, M.D., and Robert Cook, M.D. Published August 1971 by Lange Medical Publication, Los Angeles, California; 316 pages, flexible cover (7⅛" by 10¼"); price $8.00.

All too often, students leave medical school knowing little practical ophthalmology. As I read through this book I could not help but think back to my medical school days and the three years I spent in general practice. How often I could have used this text.

The authors have produced an astonishingly comprehensive review of ophthalmology. Ocular diseases and emergencies that can and should be treated by general physicians are emphasized. There is an informative chapter on methods of examination of the eye, and there is a very useful chapter on the management of common ocular disorders. There are chapters dealing with specific diseases of the conjunctiva, cornea, sclera, uveal tract, lens, vitreous, and retina. The chapter on neuro-ophthalmology is especially well done. Another section deals with those ocular disorders associated with systemic disease. The bibliography at the end of each chapter is adequate and current. There are numerous diagrams and illustrations. The photographs are good, but unfortunately not in color. The text is concise, well written, and above all, accurate. I can enthusiastically recommend it for your library.

—Roy F. Statton, M.D.

Teeth, Teeth, Teeth, by Sydney Garfield, D.D.S., published by Simon and Schuster, New York, 1969; 448 pp (6½" by 9½"), hard cover, $9.95.

If you want to know all about teeth, you can stop looking; read this book. It will tell you what they look like (it has more than 300 illustrations), and how many you have. You will learn about jackets and dentures, about fillings and amalgams, about relines and alveoplasty, and a great deal about Dr. Garfield.

The book is a tribute to his profession by a man who just had to tell you that teeth are important, and how important they are to him and to you, and to babies, and sharks and chimpanzees and prizefighters and actors. You will learn more than you thought you would about dentists, and you will find yourself reading funny things you never thought happened to them. If you want to know how good toothpicks are, what hydraulic cleaning is like, and how we got toothbrushes, go no further.

Dr. Garfield has studied engineering and has been an aircraft designer. He lives in Beverly Hills, California now. See what I mean? I put the book down when I first got it, then I peeked at it, then I browsed, and I wound up reading it. I suppose you will too.

—F.C.

The Water Encyclopedia, by David Keith Todd, published by Water Information Center, Port Washington, New York, 1970, first edition; 7" by 10" with hard cover, 559 pages, $27.50.

The author is Professor of Civil Engineering at the University of California at Berkeley. The book is concerned with climates, hydrology, surface and ground water resources, water use and needs, and water quality. Information is included concerning water resources agencies, and constants and conversion factors.

There are nine chapters, and the book is simply a mass of tables, so you should be able to find anything you ever wanted to know about water. There were three things I could not find in the index, however: polywater, holy water, and water on the knee.

The whole book is about water. Water, water everywhere. Enough to drive you to drink. I found that raindrops can fall on your head at 30 feet per second; that's 20 mph, I figured. And the largest officially recorded hailstone had a diameter of 5.41 inches.

It rains 325 days a year somewhere in Chile, but it didn't rain once in 19 years in Wadi Halfa.

The Hoover Dam has a reservoir capacity of 29,827,000 acre-feet. Four hours of immersion in water at 50°F is lethal. And there's more, lots more.

—F.C.

Save Your Health and Your Money, by Patrick J. Doyle, M.D.; published by Acropolis Books, Ltd., Washington, D.C., 1971; 240 pages (5⅞" by 9"); $3.95 paper, $6.95 cloth.

This book was written by a doctor to be read by nondoctors. Its style is entirely question and answer, but an all-right index directs you easily to the Q&A. The author is "a long-standing active member of the American Medical Association." SYH has 27 chapters. It discusses fees, and there is nothing there to offend you or me; drug costs, insurance, medicare, malpractice, quackery, veterans, abortion; all these appear in conversational form that makes for easy reading.

There are also: a reference library plan, a glossary, pamphlets to write for, a list of voluntary agencies, one of US government agencies, one of professional associations, another of state insurance commissioners, and an immunization schedule.

It's not a what-to-do-until-the-doctor-comes book; it's what the title says it is. There's a need for a book like this, and it does what it's supposed to do. I'm not a nondoctor, but I'm reading the book and liking it. Your patients will, too, and you just might.

—F.C.

The Law

H.R. 2 hearings

The House Armed Services Committee began hearings on H.R. 2, a bill which would establish a Uniformed Services University of the Health Sciences. In his opening remarks, Rep. Hebert (D) La., sponsor of the bill, noted that the armed services had experienced problems of maintaining an adequate supply of physicians and of retaining a career professional medical corps. He said that the bill would aid in the procurement of physicians for the armed services and would contribute to a higher rate of retention by creating a fountainhead for the training of professional military physicians.

The Defense Department presented a statement supporting enactment of H.R. 2, stating that it would provide physicians for the armed services and also provide continuing education of military physicians. The Department also supported a program of scholarships to students in civilian schools. The scholarship recipients would be obligated to serve in the armed forces upon completion of their training. The statement, presented on behalf of Secretary Laird, said that such scholarships would meet the immediate needs of the armed services.

Also testifying on this bill was Louis M. Rousselot, M.D. Dr. Rousselot recommended that the proposed University be a division of an existing medical school within the District of Columbia. The affiliated medical school would define admission standards, curricula and criteria for graduation. Students participating in the military program would be taught the clinical sciences utilizing military medical hospitals in and around the District of Columbia. Dr. Rousselot indicated that medical officers could be trained more quickly and at a lower cost by an existing school.

Appearing before the Committee to present the views of the American Medical Association was Bland W. Cannon, M.D., a member of the AMA Council on Medical Education. Dr. Cannon supported an expansion and greater utilization of the existing medical education system rather than the development of a new and different kind of institution such as the Uniformed Services University of the Health Sciences. He said it is vital that ". . . the number of physicians in the uniformed services be adequate to enable them to carry out their missions, and that those physicians be thoroughly trained and competent in order that those serving our country in the uniformed services might receive the best possible medical care." Dr. Cannon supported a program of scholarships or other direct financial assistance through affiliation agreements with existing schools.

Among other witnesses to be heard was John Parks, M.D., Dean of the Medical Center of the George Washington University. Dr. Parks presented the views of the Association of American Medical Colleges in opposition to the establishment of a self-contained government medical school and suggested an alternate proposal utilizing existing schools of the health professions.

Outpatient addict treatment

Sen. Hatfield (R) Ore., has introduced S. 2537, the Narcotics Abuse Treatment Act of 1971. Under the bill, a program would be established within the Department of HEW which would allow the Secretary to authorize a physician to administer drugs to an addict. The physician would be required to submit an itemized statement to the Secretary containing the costs of the services provided and all necessary verifying data. Information regarding the addict would be kept confidential and could not be used in any criminal action against him. The cost of the program would be fully borne by the federal government.

House passes drug listing bill

By a voice vote, the House passed H.R. 9936, the Drug Listing Act of 1971. The bill would require that manufacturers and processors of drugs submit to the Secretary of HEW a list of all drugs manufactured or processed for sale. Manufacturers would also be required to furnish to the Secretary current labeling materials and package inserts for each drug covered under the program.

RMP

To the Editor:

Ascorbic acid in sufficiently high doses can affect urine glucose determinations, but the specific response depends on the particular glucose test employed. Tests utilizing glucose oxidase as a reagent may give a false negative glucose value because of the inhibitory effect of ascorbic acid (in concentrate as low as 30-40 mg%). This inhibition is transitory and results only in a delayed response for the test procedure, however, such a delay renders this particular type of test procedure doubtful as a true indication of urine glucose in the hands of the patient.

Products of this type include Clinistix^R, Uristex^R, Combistex^R, Labstix^R, and Tes-Tape^R.

Urine glucose tests based on cupric sulfate reduction may yield false positive values in the presence of ascorbic acid at sufficiently high levels due to the reducing power of vitamin C. Although more stable to ascorbic acid than the glucose oxidase tests, the cupric sulfate tests will be affected by urine levels of 250 mg% or more and in cases of ingestion of large daily doses of vitamin C for an extended period of time, the patient should be instructed to wait an additional 2-3 minutes before reading the test results. It is difficult to predict urine levels of ascorbic acid based upon dosage ingested due to variable patient response, but it is safe to say that cupric sulfate reduction tests such as Clinitest^R or Benedict's Qualitative Reagent will not be appreciably affected by the usual supplementary doses of vitamin C.

Paul Groth
Nebraska RMP
800-742-7331
Pharmaceutic and
Therapeutic Information

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—
Nov. 13 — Norfolk, Elks Lodge
Nov. 20 — Grand Island, St. Francis Hospital

NEBRASKA SOCIETY OF CLINICAL HYPNOSIS — Two day course in Medical and Dental Hypnosis, including Group I (beginners) and Group II (advanced) on November 13 and 14, 1971, presented by Kay F. Thompson, D.D.S. and Robert E. Pearson, M.D. It will be held at the Holiday Inn, 3321 South 72nd Street, Omaha, Nebraska. Application forms obtainable from Nebraska Society of Clinical Hypnosis, 6540 Florence Blvd., Omaha, Nebraska 68112.

NATIONAL ASSOCIATION FOR THE PREVENTION OF BLINDNESS — Annual Conference; November 17, 18 and 19, 1971; Roosevelt Hotel, New York City. NCPB's address: 79 Madison Ave., New York, N.Y. 10016.

AMERICAN MEDICAL ASSOCIATION 25TH CLINICAL CONVENTION — New Orleans, Louisiana, November 28 - December 1, 1971.

NEBRASKA STATE OB-GYN SOCIETY —Frontier Hotel, Las Vegas, Nevada; Nov. 30, Dec. 1 and 2, 1971. Write to: G. W. Orr, M.D., Program Chairman, Department of Obstetrics and Gynecology, University of Nebraska Medical Center, 42nd and Dewey, Omaha, Nebraska 68125.

NEBRASKA STATE MEDICAL ASSOCIATION ANNUAL SESSION — April 30-May 3, 1972, Hotel Cornhusker, Lincoln, Nebraska.

NEBRASKA STATE MEDICAL ASSOCIATION ANNUAL SESSION — April 29-May 2, 1973.

AMERICAN MEDICAL ASSOCIATION ANNUAL SESSION — June 18-22, 1972, San Francisco - Hilton Hotel, San Francisco, California.

Medicinews

Medical assistants certified

A record number of medical assistants have passed the 1971 certification examination. The names of 169 successful examinees have been announced by the American Association of Medical Assistants. Examinations were held in June at 42 testing centers across the nation.

Of the 169 certificates earned, 77 were clinical certification, 52 administrative, and 40 dual. Nine of the individuals earned a CMA in a second category, while 160 were certified for the first time.

The certification examination is a professional goal signifying broad mastery of AAMA's standards for highly qualified medical assistants. It may be attained in either the clinical or administrative categories, or both. The complete examination for dual certification covers medical terminology, anatomy and physiology, human relations, medical ethics and law, office skills, accounting, examination room techniques and laboratory orientation. The program was developed in 1961 with the first examination held in 1963. Merck, Sharp and Dohme has assisted in supporting the program annually since 1962.

The AAMA Certifying Board will host a dinner honoring the new CMA's on November 10, as part of the 15th annual convention in Atlanta, where certificates and pins will be issued.

The 1971 CMA's include:

Behrends, Mrs. Leah, Lincoln (Clinical); George, Mrs. Beverly J., Lincoln (Clinical); Lawrence, Mrs. Berdeen, Lincoln (Administrative and Clinical); Weis, Miss Zella P., Lincoln (Clinical).

AAMC installs Dr. Buchert

Walter I. Buchert, M.D., medical director of the Geisinger Medical Center, Danville, Pa., was installed as president of the American Association of Medical Clinics at their Annual Meeting, Sept. 15-18, Cleveland.

Dr. Buchert is one of the originators of the AAMC's Trusteeship for Health Plan, a program for the complete health care for all Americans.

Dr. Buchert is a member of the Montour County Medical Society, the Pennsylvania Medical Society, the American Medical Association, and the American Urological Association.

Medical aspects of sports

The 13th National Conference on the Medical Aspects of Sports, sponsored by the American Medical Association under the auspices of its Committee on the Medical Aspects of Sports, will be held in New Orleans, Louisiana, at the Jung Hotel on November 28, 1971. The Conference is held annually in conjunction with and on the first day of the Clinical Convention of the American Medical Association.

As was true of the previous twelve Conferences, the 13th will cover a wide range of subjects of interest to those serving school and college athletic programs. Included will be forums and discussion sections relating to drugs in sports, protection of the lower extremities, electrolyte and thermal balance, innovations in sports medicine through state medical societies, team physician relationships, crucial health perspectives, and a medical focus on athletics. At the Conference Luncheon, W. Delano Meriwether, M.D., winner of the J. D. Lane Annual Research award for his work at the National Cancer Institute in Baltimore, Maryland; presently, a researcher at the Harvard Medical Unit, Boston; and a latent sprint champion will discuss "MY EXPERIENCES AS A NEOPHYTE TRACK ATHLETE." At the evening session, demonstrations will be staged on taping, equipment fitting, vision, emergency resuscitation and pre-participation examinations.

The Conference is open to key nonmedical athletic personnel as well as interested physicians. Those who would like to receive further information concerning the Conference should address the Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

AAMC's health plan

A plan for "the complete health care of all Americans, requiring neither federal funding nor enabling legislation" was unveiled at the 22nd Annual Meeting of the American Association of Medical Clinics.

The plan, titled "A Trusteeship for Health," enlarges the concept of group-practice medical and health care to encompass and include all the medical facilities and personnel in geographic communities, cities, or regions through the organization of "trusteeships" formed by medical and lay leaders in those areas.

The Trusteeship plan calls for the assumption of responsibility by such leaders for comprehensive health care in their communities, ranging from health education and accident prevention to the efficient utilization of complex and specialized facilities and services.

The AAMC proposal calls for a new accent, in health-care delivery, on the problem of keeping people well, rather than merely providing treatment after illness occurs.

Method of Payment

The AAMC plan permits complete flexibility, within each health-care community, in determination of the method of payment for services rendered. According to its authors, the plan can accommodate complete prepayment for all services by the individual or his employer, an insurer, or government, as well as a fee-for-service method for use by individuals prefering such a plan.

Blue Shield

With a record high membership of 65.5 million persons, the nation's 72 Blue Shield Plans began the commemoration of 25 years of service as a national prepayment system with the issuance of the Association's 1971 annual report on September 20.

The report was issued in Chicago by John W. Castellucci, president of the National Association of Blue Shield Plans (NABSP) which serves as the coordinating agency of the 72 Blue Shield Plans in the United States and Puerto Rico.

Castellucci reports the phenomenal growth of Blue Shield membership from about 1 million in 1946 to nearly 66 million at the end of 1970. During 1970, regular membership in the 72 Blue Shield Plans increased by 2,436,298 to a total of 65,530,827 persons. Another 13,428,995 were covered under government programs for which Blue Shield Plans serve as fiscal agents, bringing to 78,959,822 the number of persons being served by Blue Shield.

The report also shows a significant increase in benefits paid.

During fiscal 1970, regular members received $2,176,S32,500 in benefits, an increase from $1,854,147,847 over the previous year. Benefits paid on behalf of the 13,428,995 persons served under government programs amounted to $1,656,618,054 bringing the total paid in claims to $3,833,450,554.

Other highlights of the report include:

—Increased emphasis on utilization review to make the health care dollar as productive as possible;

—Greater public representation on the Plans boards of directors.

Medical assistants to meet

A forum on the future of medical assisting, with special emphasis on education, will highlight the 15th annual convention of the American Association of Medical Assistants. The meeting, utilizing the theme, "Age of Achievement," will be held Nov. 9-13 at the Marriott Hotel in Atlanta, Ga.

After a two-day session of the House of Delegates, the educational program will begin on Thursday, Nov. 11, with a three-part presentation on the radical treatment of kidney failure. John H. Sadler, M.D., director of the Atlanta Regional Nephrology Center, will open the session with a discussion of "Kidney Failure: Artificial and Transplanted Organs." His talk will be followed by "The Right to Live: The Price of Survival," presented by Elbert P. Tuttle, M.D., director of the Division of Nephrology and Inorganic Metabolism, Emory University School of Medicine, Atlanta. Doctor Tuttle will elaborate on the physical, mental and financial costs involved in prolonging life.

During this same session a team from the Atlanta Regional Nephrology Center will discuss "The Right To Die; To Walk Not Alone." This unique section of the program involves people from various occupations who will show medical assistants how they can help the patient and his relatives cope with terminal illness.

Worcestershire Sauce and the Kidney — K. J. Murphy (Princess Alexandra Hosp, Brisbane, Australia). Med J Aust 1:1119-1120 (May 22) 1971.

Three patients had kidney disorders and a history of long-continued and excessive intake of Worcestershire sauce. The one with the heaviest intake of sauce progressed to terminal renal failure, one presented with moderate renal failure which improved when the sauce was ceased, and one had bilateral and recurrent kidney stones and a nonspecific aminoaciduria. In these and two other patients reported with this association, the response to the oral ammonium chloride test had been abnormal. Excessive Worcestershire sauce can cause kidney damage affecting glomeruli and tubules.

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Medicinews . . .

Powell calls government service unsatisfactory

J. Enoch Powell, former British Minister of Health and considered by many the world's leading authority on central government control of medicine, warned Americans to beware of copying Britain's over-centralized and over-rigid system of medical care.

He also warned against attributing to the British National Health Service some of the undoubted advantages of British health care.

He called the demands on government-supplied medical services in Britain "for all practical purposes unlimited." To deal with the situation, Britain's Minister of Health somehow must ration the supply of medical services; one of the methods of doing this is using waiting lists, which are as long today as they were when the service was initiated 25 years ago.

Powell for three years headed the British National Health Service, from 1960 to 1963. His objective was to make government-run medicine work. "It did not give satisfaction," he said, "because by its very nature it cannot satisfy." Powell's remarks were addressed to a national meeting of private doctors, sponsored by the Association of American Physicians and Surgeons.

Conferences at Iowa

Continuing education conferences on cardiac and respiratory disease and on obstetrics and gynecology will be held at the University of Iowa Health Center in December.

The cardiac and respiratory disease conference will be held on Friday, December 3, with the morning session devoted to cardiac problems and the afternoon session dealing with respiratory disease.

The obstetrics and gynecology conference will be held Wednesday and Thursday, December 8-9. Among topics at the conference will be methods of determining fetal maturity, the hazards of breech delivery, the value of a high risk prenatal clinic, management of ovarian carcinoma.

For information on registration and schedules of other conferences, write: Director of Medical Education, Office of the Dean, The University of Iowa, Iowa City, Iowa 52240.

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Illustrations should be numbered and their locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be in black (India ink) on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

Manuscripts (original, not a carbon) should be sent directly to the Editor at the **Journal's** address.

Letters to the Editor submitted for publication should be prepared as above, and must carry the notation: To be Published.

Reprints should be ordered from the printer, NEWS Printing Company, Norfolk, Nebr. 68701.

The Law . . .

House passes VA bills

The House passed H.R. 10880, the Veterans' Medical Care Act of 1971, which would extend VA hospital and medical benefits to certain qualified veterans' dependents. Under the bill, the dependents of a totally disabled veteran or the survivors of a serviceman killed during active duty would be eligible, on a space available basis, for VA services. The bill further provides for certain outpatient care and for an expanded medical education role through cooperation with local medical schools. The House also passed H.R. 10879 which would authorize the Administrator to enter into agreements with various institutions for the central administration of internship and residency training programs. Costs incurred pursuant to such training in VA service would be reimbursed through the Administrator.

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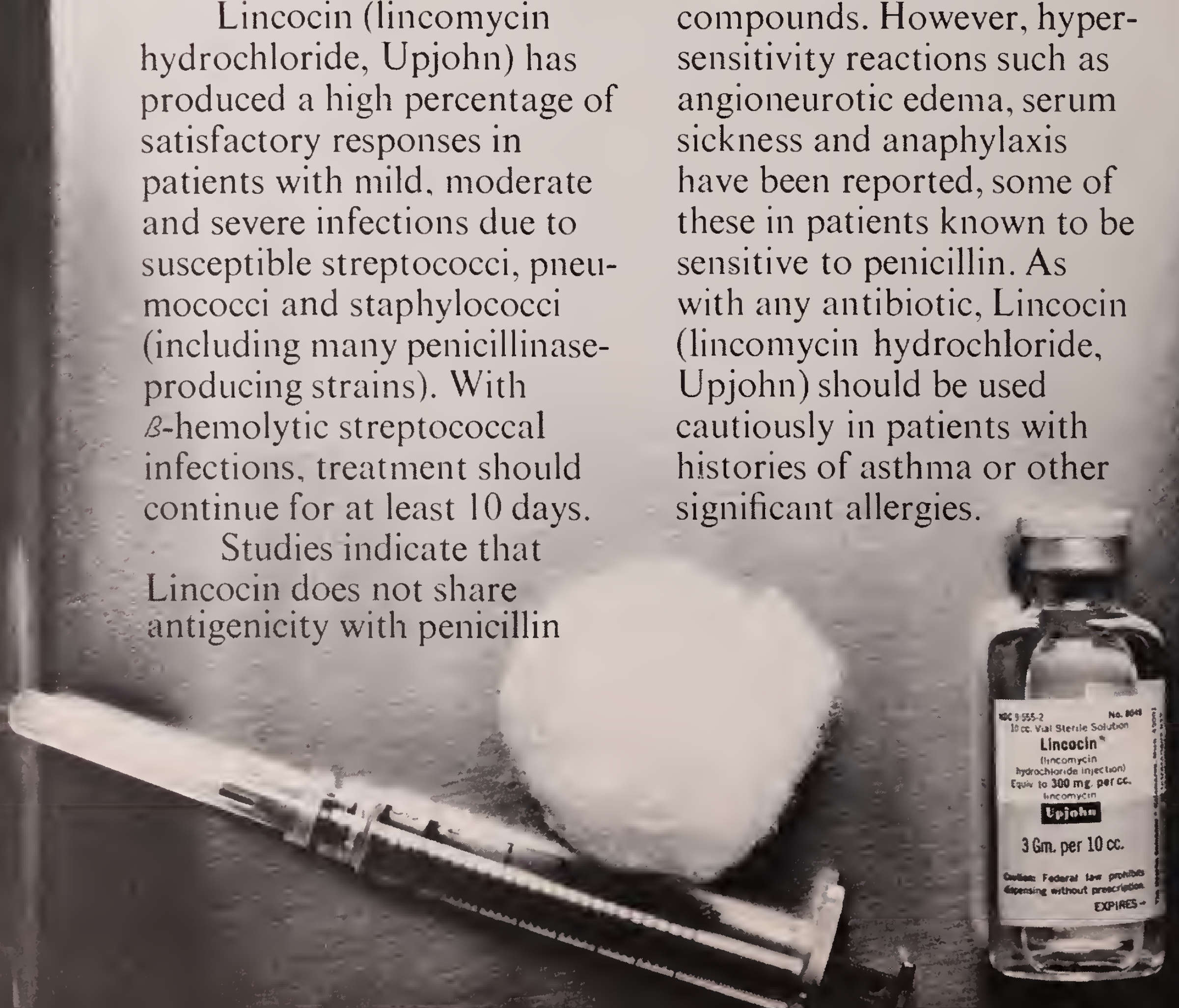
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The 1972 combined meeting of the Society for Cryosurgery and the American Society of Contemporary Medicine and Surgery will be held February 28 through March 3, 1972 at the Diplomat Hotel, Hollywood, Florida.

The theme of the meeting is "Continuing Education for Contemporary Medicine and Surgery." Enrollees will receive certificates of participation in continuing education.

Lectures will be given by the distinguished permanent faculty and by noted guest speakers. The program will include a special symposium on cancer conducted by world renowned specialists. The latest advances in dermatology, gynecology, ophthalmology, otolaryngology, and urology will be discussed by experts in these fields.

Free time has been made available for doctors who wish to present papers containing new material on these subjects. Papers will be selected on the basis of merit, originality, importance, and general interest. Please submit title and 150-word abstract before October 1, 1971.

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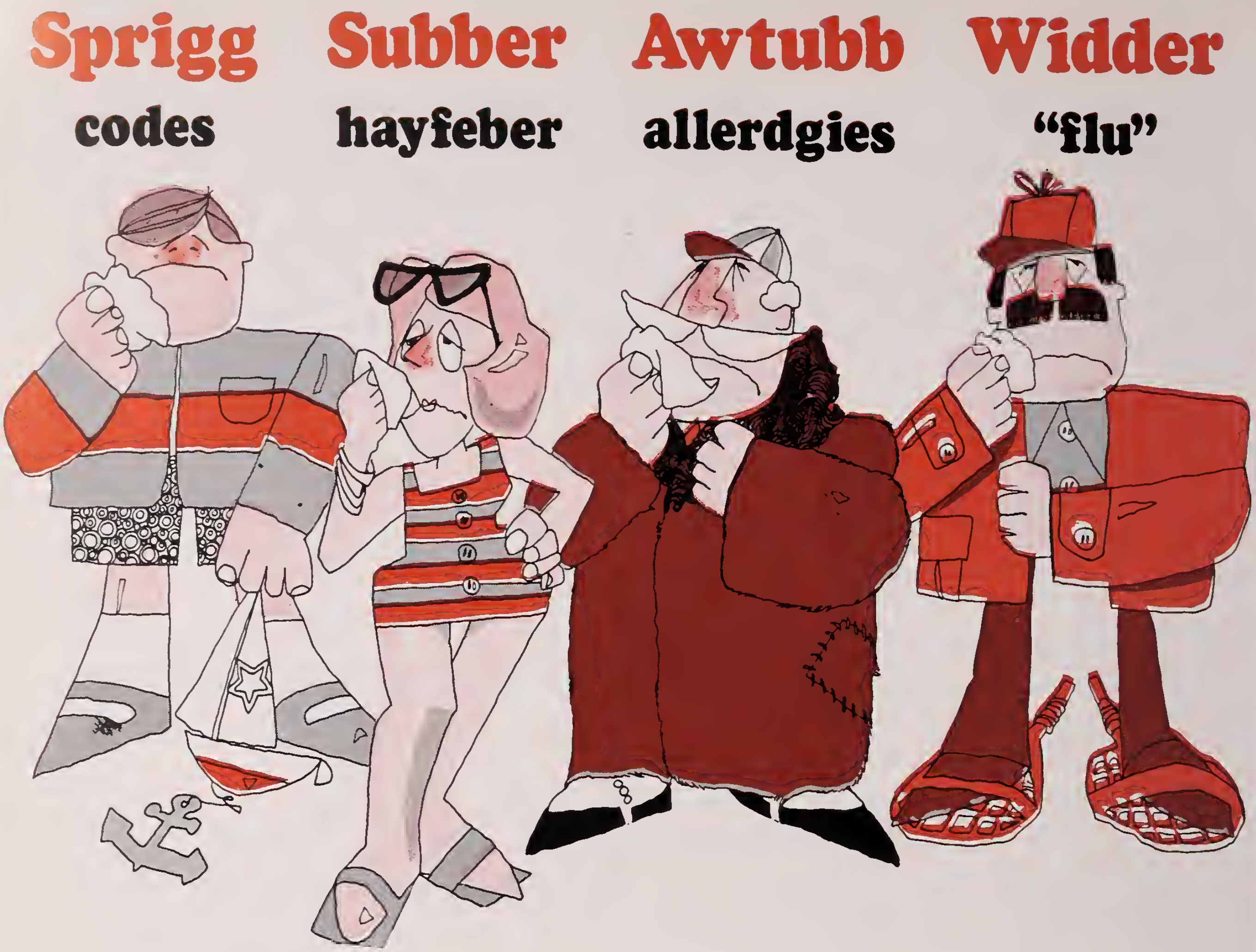

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THE NEBRASKA MEDICAL JOURNAL

UNITS

Units are wonderful things, they are necessary things; if you haven't measured it, it was said, you don't know what you are talking about. They fascinate me when they are sensible and they irritate me when they are cumbersome.

Consider the red cell. We say four million, four and a half million, and five million, and we pay no attention to the word "million" as we repeat it. If we changed the unit, and stopped saying "million" every time, would not 4, 4.5, and 5 sound better?

Think of penicillin, which we give in millions of units. But 600,000 to 3 million units can be expressed as 6 to 30 units if we take out some of the ciphers, or as I would say, *decipher* it, and use larger units.

Then there's the calorie. If you are hungry on a five thousand calorie diet, you have to remember that these are kilocalories, and your diet really contains five million calories. But thousand or million, does not *five* make more sense?

Barometric pressures are reported on television over a range of 29 to 31. The range is too small and the end-points too large, and we must say 30.2 and 30.4. But we might substitute 90 for 29.0 and 100 for 30.0 and so on. At skating contests, the scores usually run from 5 to 6, and we are again bombarded with decimal points, as 5.7 and 5.8, where 7 and 8 would be better, I think.

Perhaps we need more units. We say 3 PM for 3 hours after noon; we do not say 180 minutes or 10,800 seconds PM. We have curies, but we have microcuries too. We have meters, but we use millimeters also. We have a picogram, too, and that's one trillionth of a gram, whatever a trillionth is.

Our senses are dulled by endless and unintelligible zeros before and after the decimal point when we insist on retaining units that, like unwelcome guests, have stayed too long. We do not measure distances between galaxies in inches.

—F.C.

HOSPITALS AND HOW THEY GREW

There are a great many hospitals in the United States, and there are all sorts of them. They have been built, like department stores, according to the law of supply and demand, as we used to put up schools in the midwest, one every so many miles; and they have been erected by just about every religious order, by various governmental levels, by universities, by communities, and by proprietors. They have grown haphazardly, and this may be the best of all possible ways, or it may be timeworn. They have been constructed for short-term or for long-term use; and for special purposes, as for tuberculosis, psychiatry, malignancy, orthopedics, pediatrics, and obstetrics. In 1960, we had this many hospitals:

6,876

Of these, 435 were federal, but nonfederal included state and local government, as well as proprietary for-profit institutions. Of the voluntary nonprofit hospitals, there were:

3,579

In 1969, the number of hospitals was:

7,144

In 1970, there were 165 VA hospitals.

We have about 1.7 million hospital beds in this country, we admit some 30 million patients annually, and the average census is approximately 1.4 million.

The supply and demand law is an old one and it has never been repealed. It may be better than having the government say you need one more hospital (or one less) and we will build it for you (or we will close it), and we will decide how big it must be, and we will control it.

To build things when you want them and where you feel you need them is proper and wise, but money is important, and we must turn to government now for things that used to be nongovernmental. But if we lack money and thereby lose autonomy, it makes little sense to ask the government to give us back our own money, while we have ceded control.

There are three and a half thousand voluntary nonprofit hospitals and more than seven thousand hospitals in this country, for 200 million people. About half the hospitals in the U.S. are the kind you usually see in your community. We don't build cities anymore; we've finished putting up our cities, and we've filled them with hospitals. We enlarge and improve our hospitals, and even rebuild them completely instead of adding to their numbers. In voluntary nonprofit hospitals, the number of beds has gone up, as hospitals have become larger, from some 482 thousand in 1960, to about 595 thousand in 1968; that's over 23%.

The modern American hospital is a good place to go when you're sick. It's easily the best in the world.

It does its job well. It's better than it used to be, much better. We've got lots of them. And the nurses are wonderful.

—F.C.

LET'S NOT DO LAMINECTOMIES

"He had a funny pain around his knee and they did a laminectomy," I heard. I hope the pain goes away, I thought silently, and aloud, I said, "I guess they cut some nerves." Now I suppose you can say you are going to do a laparotomy when you are about to perform an exploratory procedure, although even there I like *celiotomy* better. But when you are through exploring, and you have ligated a bleeding vessel or cut some offending adhesions, why then you haven't done a laparotomy any more. You have accomplished ligation of an abdominal vessel or enterolysis, or lysis of adhesions if you prefer.

I suggest that there is no room for the words laparotomy and laminectomy. When diagnoses were uncertain, they were elegant names whose only function was to disguise our ignorance. But they no longer have any place before surgery, and less than none when the operation is over. If the procedure was sympathetic neurectomy, or lysis of adhesions, or bowel resection, or removal of intervertebral disk, you have only to say so. To speak of laparotomy or laminectomy after the operation is over makes little sense. It doesn't tell anyone what you did.

—F.C.

BETWEEN CASES

Love your doctor.

I looked at my calendar the other day and found I had to celebrate Leif Erickson's Day, Columbus Day, United Nations Day, Veteran's Day, United States Day, Fire Prevention Day, and Halloween, all in one month. I finally got through it, and then I had to get ready for the next month. But I fell to wondering: Do people eat more pickles on Pickle Day?

Anyway, I have just established Love Your Doctor Day. Never mind the pickles, and skip Mr. Erickson. Celebrate every Ides of March, or Income Tax Day, or April First, as Love Your Doctor Day. Even the Groundhog has his Day.

Dear M.D.
This is true
You love me
And I love you.

Maybe February 29th would be better.

Thought of the Month.

The grocer doesn't make house calls any more.

The right side is worse.

We were interviewing a patient whose knees were hurting and someone said in a meaningful whisper, "And you know, the right side is worse than the left."

That's bad.

He might have said, "The left side is better than the right."

That's good.

Very funny.

Thanks a lot.

"The autopsy will prove I'm right."

I'm tired of looking it up.

After digging my way through dull articles and thick dictionaries, I have learned that ipsilateral means the same side;

contralateral means the other side; homolateral means ipsilateral, I think; and heterolateral is the same as contralateral.

A graft can be an allograft or a homograft, and there's a heterograft; and an allotransplant, too. There are more, but that will give you an idea of what I am up against. I am an avid reader of dictionaries, but my memory is only average, and I look up ipsilateral every time I see the word. And all it means is the same side. Allografts annoy me, too.

I'll try to keep this short, so you can finish reading this essay on the ipsilateral side.

The history.

"He gets similar symptoms when he lies on his side in his clavicle."

I'd get symptoms, too, but I think I know what he means.

The physical.

"Patient has bilaterally normal testicles, one of which he still has."

The diagnosis.

"Rye neck."

—F.C.

WHY DO WE WRITE?

Medical writing, like haiku, is a strange form of literature. It is neither better nor worse than novels and poetry; it is *different.* The medical journal differs from the newsmagazine, and the medical article from the short story, in several ways.

It is a contribution to progress. It is scientific, and it is humanitarian. Medical innovations are made known through books, meetings, and journal-articles, and the last of these is the most important. Research is reported in journals first, then in books, and the information in books is often several years old; that found in journals is new. Without the article, or paper, or essay, there would be no progress in medicine.

It is an unfortunate combination of experiment devising, experiment conducting, statistical analysis, and the writing itself. The setting up of the study is often better left to the logician, the analysis to the statistician, and the writing to a professional writer, but the physician usually does all of these, for no sensible reason.

The writer does not get paid. This is the strangest of the strangenesses. The author spends time as he conjures up the experiment, performs the study, writes, and submits it to a journal, hoping that it will be accepted, and knowing that he will get nothing for his pains. Why, then, does he write?

He writes for pleasure, knowing the kind of market he must be satisfied with, and he does not care.

He writes to contribute to the fund of scientific knowledge, and to help people.

He writes to maintain his position where writing is required of him. I have no quarrel with publish-or-perish. If you are in a research-minded institution, you should be research-minded.

He writes for prestige. No amount of soul-searching can blot this out. His friends will think more (or less) of him and they will compliment him. He will be known in his professional groups. His wife will be impressed. He will be happy when the acceptance letter is in his hands, and when his article and his name are in print. He will be delighted when he later becomes a reference.

Yet does not the searching for prestige consist of other things? And does not the medical writer sometimes get paid, indirectly, but nonetheless paid? For if he must publish or perish, that is part of his daily work, and if it is important for him to be known, writing becomes a necessity as well as a luxury.

But it is the author in private practice whom I respect the most. He has not allowed his curiosity to be dulled by the requirements of his daily work, away from a research institution. He is not pressured to write. He receives no grants. He does his own leg work. He has little access to libraries, nor has he assistants trained in this direction. And he buys reprints and mails them at his own expense. Above all, it is he who keeps a vast amount of material from going to statistical waste, for it is to the practitioner that most patients go, and this wealth of information is never studied unless the physician in private practice is endowed with curiosity, intelligence, and the willingness to work at a sort of second vocation. I think a patient is lucky if he has this kind of a doctor.

Perhaps the man in the university writes too much, and the physician in his small-town office too little. But I do not think there can be too much. And if a doctor will write happily without pay, we are all, readers and patients, indeed fortunate.

—F.C.

OUR MEDICAL SCHOOLS

The *Journal* has a monthly feature called "Our Medical Schools," in which we tell what is going on at Creighton and Nebraska. But this is what went on in the medical schools in the U.S. in 1970.

—24,987 students applied for admission to medical school.

—They filed 148,797 applications, or an average of six per student.

—11,500 students were accepted, so that 46 percent of those who applied got in.

It wasn't too hard and it wasn't too easy; just about half got in, and half sounds about right.

—F.C.

SPELL IT WRITE

Orthography sounds suspiciously like aortography, and is just about as difficult. The only difference is, as we have said before, when a doctor makes a mistake, someone may die, but an eraser will improve your spelling. Professional writers are almost uniformly good grammarians and superb spellers, but we know of one who was a brilliant writer and a very bad speller. If a surgeon cannot spell cholecystectomy, would you let him remove your gallbladder?

Some famous people, including one of our presidents, have tried to foist simplified spelling on us, and while it did not succeed, it may be taking hold as we watch it, like a slow-growing tumor. O well, we write sulfate for sulphate now, but I haven't seen fosfate yet.

—F.C.

Effects of Marihuana on the Solution of Anagrams, Memory and Appetite — E. L. Abel (Dept of Psychology, Univ of Toronto, Toronto). Nature 231:260-261 (May 28) 1971.

Thirteen adults between the ages of 22 and 37 served as volunteer subjects. Before the experiment began, and at least 30 minutes before any subjects were given marihuana, each subject was given a plate of marshmallows. At the beginning of part A each subject was tested on the Taylor manifest anxiety scale. After the questionnaire had been administered, the subjects took part in an anagrams game. The subjects' task was to unscramble the letters in the shortest possible time. Part B followed immediately after the return of the marshmallows to each subject. Subjects were then asked to listen to a "newspaper report," which was in fact a copy of the Babcock memory test described by Rapaport. Subjects in the marihuana condition were then given two marihuana cigarettes to smoke. After its completion, subjects were asked to write out as much of the newspaper story as each could remember. There were no significant differences in the recall of items from the anagrams list in part A. In part B, however, subjects who had smoked marihuana recalled significantly fewer items than did controls. Comparison of the error scores also indicates that no only do marihuana subjects remember less than controls, but what they do recall is likely to be less accurate. As for the effects of marihuana on hunger, it increased the subjects' desire for food.

Principles and Concepts of Extrication

KENNETH F. KIMBALL, M.D.
Assistant Professor of Surgery, University
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Kearney, Nebraska

EFFECTIVE emergency medical care at the local level can be achieved only by close cooperation of the physician, hospital, and ambulance attendants. This article is presented as a concept to be used by the local physician for training in extrication. Video tapes and a movie showing how these things are done should be available for general use by the time this appears in print. It is hoped that physicians in each community can accept their responsibility for this important work.

Sophisticated extrication equipment is currently available among major city rescue units. The remaining ambulance services are often limited to a minimum of equipment and little or no training in its use. The need for certain minimal rescue equipment has been spelled out in the booklets of the National Research Council entitled "Medical Requirements for Ambulance Design and Equipment" and "Training" which are available from the State Health Department.

The ability to dismantle a wreck and safely remove the victim without producing further injury, while not needed in the majority of cases, may be the difference between life and death. No qualified ambulance service should find itself without this capability.

Emergency care to the patient is the name of the game. Thus, the protection of the patient against further injury and the support of life are still our primary goals. One man should be assigned to the life support of the patient during the extrication. Care should progress as with any emergency patient, using the ABC's of life support. A—Airway. Be sure the patient is breathing. Simple support of the head in an unconscious patient may be all that is needed. Removal of secretions or blood and even ventilation may be carried out on an entrapped patient. *The airway must be maintained!* B—Bleeding. Major hemorrhage, if present, must be controlled. C—Circulation. Adequate circulation must be present. Cardiac arrest cannot be adequately treated in a sitting position and constitutes one of the exceptions to the rule that a patient must never be removed from a vehicle until he has been splinted and prepared for removal. D—Examination and treatment. The patient should be examined for injuries, open wounds, and fractures. The concept of treatment of these injuries must not be compromised and careful preparation before movement is needed.

Concompetent with protection of the patient is protection of the accident site. Use of flares, red flags, and the proper placement of the ambulance with its lights flashing can all help to prevent a second accident. Passers-by who wish to help may be used to go down the road in each direction and hold red flags or flares.

Only life-threatening situations such as cardiac arrest, fire, or dangerous gases should preclude the careful preparation of the patient before his removal. Here, as in all of medicine, the relative hazards must be weighed and the course of least danger taken.

Use of I.V. fluids may be lifesaving while awaiting removal from entrapment in those instances where shock is present, where attendants are trained and where its administration is authorized by a physician.

With the patient stabilized, the vehicle should be carefully opened to permit his removal. This technique will vary so that a single method of removal may not be applicable in each case. Constant awareness of possible further patient injury is mandatory. Dry chemical fire extinguishers should be on hand to protect against ignition of gas, oil, upholstery, etc. Asbestos blankets may be needed as protection against metal chips, cutting torches, and cutting wheels. It may first be advisable to strip the headliner from the vehicle (where possible) if the roof is to be cut to prevent fire in this area.

Only after the patient is adequately exposed, his wounds dressed and his fractures immobilized, should he be removed from the vehicle.

Methods of approach vary greatly. Nothing more than simple opening of doors or the breaking of windows may be needed. The use of a large heavy screwdriver or pry bar may be adequate. Bending of metal may be done with the Porta-Power tool, a jack or simply a heavy wrench. Cutting can be done with a regular torch, a metal circular saw, a metal jigsaw or by use of a hammer and a simple cutting tool made from an old car spring.

In situations where the front of the car is jammed in with entrapment of those in the front seat, a chain may be placed about the front seat and the seat winched back via a cable through the rear window. (Obviously, those in the rear should first be removed).

Certain precautions are indicated in all accidents. Use of inflatable splints (which may be excellent for immobilization of soft tissue injuries or fractures below the elbow and knee) may create problems due to minute punctures from glass and metal. These may appear to be well inflated at the time of application and be found to be empty and non-effective by the time the patient reaches the hospital. All unconscious patients should be presumed to have spinal injury, and short back-boards should be routinely applied. In-line traction during removal and placement on long back-boards is often facilitated by the use of a rope sling such as described in the A.C.S. Bulletin.

The inside of the vehicle is often badly distorted and one must always remember to inspect carefully beneath all material and up into areas beneath the dashboard to be certain that an infant is not left beneath a folded piece of material or in a small space between two crushed areas.

Thus, the problems of entrapment are really those of exposing the patient. The preparation of the patient prior to movement should entail the same skills and know-how required for any injury. All of these methods can be read about and looked at, but only by doing does one become really proficient. We, as physicians, are going to have to accept the initiative for upgrading the level of emergency care in our own communities.

We all learn by doing, and the obtaining of an old wrecked vehicle for use as a training aid can be one of the best methods for developing skills in extrication. The vehicle should be checked to be certain that it is adequately supported, loose pieces of glass should be removed, and one must be certain that no gas or oil are about to constitute a fire hazard.

The ambulance attendants and the physician should practice both removing victims and being victims. This often impresses one with the gentleness needed while lifting and moving a patient. Critical self-examination is most helpful. Many of our communities have video-tape recorders in their schools and use of these to record and then restudy your action can be most helpful.

We, as physicians, are responsible for the medical care in our communities. How long has it been since you visited with your rescue people, helped them in their training, or worked with them to be sure that if you or any of your patients end up in a ditch tonight, these dedicated rescue personnel will know exactly how to remove you without causing further injury to you or to themselves. An evening spent with them may be the cheapest insurance you ever purchased.

Malpractice Insurance

ROGER D. MASON, M.D.

DURING the past few years, malpractice insurance has been a subject discussed at almost every medical meeting, large or small. This has been true in each of our fifty states and the District of Columbia. The subject has even spilled over to the front pages of newspapers and has become a priority subject for most journals of the insurance industry and legal and medical professions. Most of these articles speak of "the malpractice problem" or "the malpractice crisis" or "the malpractice dilemma," and frequently use the terms interchangeably. This afternoon I would like to give you my thoughts on the subject and what I think to be the prevailing thoughts of the physicians in Nebraska.

The subject is typical of many which both your profession and mine face today, in that it presents many facets, each of which appears different from an infinite number of positions. Some, as Mr. Crawford Morris at the National Medicolegal Symposium in New York City last month, feel it exists because of a loss of the traditional physician-patient relationship and the demise of the "friendly family physician." Mr. Norman Grutman at the same meeting, indicated it is only another manifestation of the "now generation" and the "new morality." Some members, including members of my own profession, believe it is due to ambulance chasing lawyers and the contingency fee. Physicians have been accused of being money hungry and having lost sight of their own ideals as exemplified by the Hippocratic Oath. All of these comments it seems to me, fail to recognize the real issue which must be the adequate compensation of the patient who is wronged and accomplishing this in a system which eliminates abuses with maximum speed and minimal cost. If this is the real issue, if this represents a facsimile of our goal, and if this goal is to be attained, then I propose that it will take the best efforts of all of us, attorneys, physicians, and insurance companies. I would prefer to eliminate over-used phrases this afternoon, but if we don't reach this goal on a state by state basis, a federal answer will emanate from Washington which will, by past standards, be unacceptable to all of us. With the creation of a Malpractice Commission by the Department of HEW, referred to in The President's Health Message, I view a federal program in the field as a real possibility.

Let me preface my remarks on medical malpractice in Nebraska by saying I think the terms "malpractice problems; malpractice crisis; and malpractice dilemma" each carry a separate and distinct connotation which is important in understanding the physician's viewpoint.

To most doctors in the state of Nebraska the problem is finding their malpractice insurance premium increasing at astronomical rates. My own premium has risen 926% in 5 years, and I must anticipate a further increase this year of an additional 70+%. This means that the same basic policy which cost me $103 in 1966 will cost me over $1600 by 1972. I, as most physicians, think this is a major problem! For many physicians, this rise in premium rates has not been on a year to year basis since some still have had old multi-year contracts. One general practitioner in outstate Nebraska had his premium go from $250 a year to $1250 a year while an ophthalmologist in Lincoln, who had been paying $87.00 a year was billed for over $1100 a year in February of this year. In addition, where physicians used to be placed in one of 3 risk categories, we are now faced with a system of 5 classifications. In some cases, this has resulted in quite capable men restricting their practice from higher risk activities, thereby diminishing the service available to the public.

When our Nebraska physicians speak of "the malpractice crisis," we envision many facts none of which I must say are good. We are conditioned and frankly scared by articles describing the situation in other states. For instance, six major carriers cancelled all existing malpractice policies simultaneously in Utah in 1969. Dade County, Florida was forced for a time to underwrite themselves for lack of a carrier. Late in 1970 there were few companies writing policies in Southern California and then only at an average premium of over $6000 a year. The entire state of Hawaii was similarly without coverage for several weeks until obtaining a group policy through a company on the Mainland. So far the AMA has met with only frustration in seeking a group carrier for its members.

Nebraska has not yet suffered to the same extent as these other examples, but neither have we escaped completely. Last year one of America's larger companies cancelled all malpractice policies carried in our state and another discontinued writing men over 65 years of age for surgery. Another major underwriter just two months ago discontinued their affiliation with the Nebraska Academy of Family Practice.

In simplest terms, we are concerned over keeping malpractice insurance available in Nebraska at any cost. This is what I refer to as "the malpractice crisis." Since this coverage exists for the benefit of the public as well as for the protection of the physician, I think every effort should be made to be certain of its availability. Furthermore I hope you would agree that all parties concerned would best be served by private carriers.

In addition to the malpractice problem and malpractice crisis, I feel I must also discuss the malpractice dilemma. The past decade has seen physicians placed in the role of steering the nation's health program as well as its medical care. Many aspects of the former are totally outside the field of medicine to control, for instance environmental pollution, malnutrition, education and the general standard of living. We recognize the importance of each of these fields both as citizens and as physicians, but as physicians we must concern ourselves with the only field in which we have a significant expertise, *medical care*. Even in so doing, and in making a conscientious effort to advance the availability of medical care, cooperate with state and federal programs and continuing to advance the scientific level of care we are constantly faced with malpractice as another hurdle.

Case in point: Medicare, Medicaid, and private health insurance carriers all require utilization review, an educational and cost control mechanism which must be carried out by a disinterested group of physicians, to insure medical justification for care given. Every hospital in the state of Nebraska has such a committee, and now with the cooperation of your organization, these committees can function without undertaking liability. We felt this special legislation was necessary despite the fact these doctors have no responsibility for the actual care given.

Case in point: Physicians' assistants are being advocated throughout the country as a means of increasing the available medical manpower, and expanding the distribution of services in both urban and rural areas. To date, malpractice coverage for the physician's assistant as well as the doctor that hires him is not available in Nebraska.

These examples I think illustrate some of the dilemma presented by the current malpractice problem.

The medical malpractice dilemma can also be demonstrated by a few examples in the field of the cost of medical care. I'm sure it is rather obvious that the skyrocketing premium rates cannot be absorbed by the physician, but must be passed on to the patient or his third party carrier. Though this results in a direct increase in costs, the effects are minimal compared to some other factors. The malpractice problem has its greatest effect on the cost of medical care through what we refer to as defensive medicine. Many physicians may hospitalize a patient an extra day, order an extra laboratory test or x-ray, or order medically superfluous consultations to protect themselves against possible legal proceedings. As one doctor explained it to me, "It is easier to explain why you did something than why you did not." The effects of this practice on overall costs could be calculated by multiplying charges, which are known to be large by the incidence which I am afraid is much greater than we dare suppose. The dilemma, perhaps enigma, is best illustrated when we are charged with the responsibility of keeping the medical care costs down and being forced to practice defensive medicine because of the malpractice problems.

Both individual physicians and organized medicine are constantly making efforts to increase the number and improve the distribution of doctors. At the same time, we see some of our older colleagues retire one to two years early rather than pay the increasing premiums and risk the legal exposure.

One other important dilemma for us should be pointed out if for no other reason than to indicate that all of our efforts are not directed against attorneys. This is relative to the lack of published statistics for malpractice premiums collected, claims paid (both judgment and out of court), investigative costs, and so on. Nebraska is not unique in this position since this factor together with the marked variation in state laws was one of the insurmountable hurdles faced by the AMA last year. With multiple actuarial factors both local and national, bureau rating, and companies reporting their casualty losses collectively valid statistics are almost impossible to acquire. I might give other examples of the malpractice dilemma, but perhaps I have made the point.

This must bring us to possible solutions or at least alternatives to our present system of handling malpractice cases. I'm sure you are all even more aware than I of what has been advocated — arbitration, blue panel juries, hearing before judges only, no fault, etc. In addition, legislation has been introduced in some states, unsuccessfully so far, to set a top limit on malpractice judgements. Some have advocated a payment schedule similar to that used in Workman's Compensation Court. In selective geographical areas, probably several of these mechanisms will see use during the next decade.

The efforts of the Nebraska State Medical Association have been aimed at improving the malpractice climate in our state without, we feel, jeopardizing the rights of the patient. So far we have focused on three separate areas in regard to malpractice. (1) obtain a realistic statute of limitations for medical malpractice including hospital and allied health personnel, (2) obtain a group basic policy for members of our association, (3) devise some means of obtaining adequate statistics on the problem as applies to Nebraska. Our efforts in the field of statutes of limitations were unsuccessful during the present legislative session, but we plan to introduce the bill again in 1972, with some modifications. Negotiations are continuing with several major carriers for basic insurance coverage on a group basis. We feel this will give the practicing physician a role in setting the insurance climate which he has not had before. We also believe this group's policy will increase access to *some* statistics at least, and help guide our efforts in the appropriate continuing Medicolegal education.

I would in conclusion like to thank each of you and your organization for the chance to appear here before you this afternoon. I personally feel that this type of communication plus a cooperative effort between us will clear up the malpractice dilemmas, eliminate the malpractice crisis, and bring the malpractice problem into focus.

Cerebrovascular Disease And Cardiac Lesions

JOHN A. AITA, M.D.
Professor of Neurology,
University of Nebraska College of Medicine

IT is common clinical experience to find insidious or gross cardiac lesions in a number of patients with cerebrovascular disease, acute or chronic. Myocardial infarction, coronary insufficiency, cardiac failure, hypotension, arrhythmias or emboli of cardiac origin have been reported in 25 to 50 percent of some series with acute cerebrovascular disease. Clinical features of cardiac nature may predominate, distract, or mask features of cerebrovascular disease and vice versa. (Askey, Bean, Bernsmeier, Friedman, Glathe, Gormsen, Heron, Johansson, Kannel, Lavy, Ledingham, Melichar, Murray, J. F., Paunesco-Podeanu, Rivera-Biascoechea, Raynaud, Schmidt, E. V., Schwartz, J., Scurry, Simonson, Stein, I., Tuveri, Warembourg, Worms).

Atherosclerotic Disease

Among autopsy studies of patients with heart disease, over four times more revealed cerebral infarction than a matched control group without heart disease. In autopsy studies of patients with cerebral infarction, 30 to 45 percent demonstrated cardiac lesions. (Anderson, R. M., Bebin, Vost). Although hypertension is the most important single concomitant of atherothrombotic cerebral infarction, congestive heart failure and even occult impaired cardiac function appear to predispose additionally to such cerebral insults (Wolf, P. A.).

It is recalled here that acute myocardial infarction may result in a marked and sudden fall of blood pressure, even to critical shock levels, arrhythmias, and mural thrombi which may detach to become emboli. Elusive (and as yet theoretical) hypercoagulability of blood may also be a factor.

The natural history of atherosclerotic cerebral infarction is closely related to that of atherosclerotic cardiac disease. Yet on surveying a number of correlations between cerebral infarction and atheroma, hyperlipemia, diabetes, hypertension and cardiac disease, one may also inquire whether these factors may be mostly concurrent, age-linked events not causally related to one another (Louis, S.).

Electrocardiograms in Cerebrovascular Disease

Diagnosis of heart disease cannot, of course, be made by ECG tracings alone, particularly in the patient with acute cerebrovascular disease. In a variety of intracranial diseases, particularly if acute and accompanied by increased intracranial pressure, ECG changes are not unusual. (Brown, R.S., Burch, Gerhard, Millar, Parker, T., Wolf, R. E.). ECG changes are even more frequent with **acute** cerebrovascular insults, especially hemorrhage (intracerebral or subarachnoid) or large infarction. These changes may superficially resemble those associated with myocardial ischemia or infarction or hypokalemic states. Even more seriously they may obscure or confuse ECG changes in the presence of actual myocardial disease. (Ananthachari, Bouvrain, Calo, Hersch, Hockman, Hoffbrand, Hugenholtz, Manning, Menon, Motte, Romics, Runge, Stern, Wong).

Besides arrhythmias (especially wanderdering atrial pacemaker), the following are typical of acute cerebrovascular disease: prolonged QT internal; elevated or lowered ST segment; T wave distortion, inverted, prolonged, tall, notched; appearance of U waves or fused TU waves. (Abildskov, Anderson, G., Ashby, Bader, Bernreiter, Bremer, Chung, DeSwiet, Haan, Harrison, M. T., Lavy, Marshall, R. J., Russell, A. S., Shirley, Srivastava, Surawicz, Tomomatsu, Wigle). It has been assumed that these ECG phenomena are of "neurogenic" origin, arising from alteration of cortical (as, area 13), hypothalamic and limbic structures of the brain, with excitation then spreading to peripheral autonomic circuits to produce abnormal myocardial repolarization. (Ashby, Bader, Surawicz). Similar ECG changes have been recorded following acute hemorrhage in cervical spinal cord and stellate ganglionectomy (Hugenholtz, McCarthy, D. S). It has been presumed that these ECG phenomena are of no important clinical significance. Recent investigations challenge this, describing the possibility of myocardial damage secondary to cerebral lesions. Such damage could be biochemical, even from catecholamine release (catecholamine myocardiopathy) following acute cerebral insult. (Connor, R. C., Douglas, B. H., Greenhoot, Hammermeister, Offerhaus).

These matters require serum enzyme studies (for myocardial injury) and the consultation of a cardiologist, for a number of patients appear with combined acute cerebral and myocardial insults in which the failure of one system is masked or muted by the predominance of the other. (Heron, Hunt, Koskelo, Tomkin, Wahi).

Mitral Stenosis

Mitral stenosis, a common scar of rheumatic fever, may provide or be accompanied by several neurologic involvements:

- Source of cerebral embolism from:
  - Endocarditis in a dilated left atrium
  - Atrial fibrillation
  - Subsequent bacterial endocarditis
  - Mitral surgery, prosthesis
  - Non-bacterial thrombotic endocarditis
  - Calcified aortic stenosis
- Mycotic aneurysm and meningitis
  - From subsequent bacterial endocarditis
- Ball valve thrombus (atrial)
- Paralysis of left recurrent laryngeal nerve
- Embolic occlusion of terminal aorta
- Rheumatic cerebral arteritis (?)

Patients are commonly female in whom the diagnosis of mitral stenosis is made between 10 and 40 years. By the age of 35 to 40 years 40 percent of these patients have developed atrial fibrillation. Mural thrombi develop in recesses of a dilated left atrium and if atrial fibrillation is present the likelihood of embolism is increased threefold. Embolism increases in frequency after age forty years. At least one clinically known bout of embolism occurs in approximately 20 percent of these patients. The middle cerebral artery is a common recipient.

The rheumatic valvular scarring prepares the way for subsequent bacterial endocarditis to develop.

Rarely, particularly in the patient debilitated with chronic mitral disease, nonbacterial (marantic) thrombotic endocarditis provides an additional source of emboli.

Left atrial stagnation permits uncommon development of a ball-thrombus which, when large enough will act, as a ball-valve to obstruct blood flow. Atrial fibrillation is commonly present. Clinical manifestations feature acute bouts of dyspnea, cyanosis, mental confusion, syncope, convulsions, focal cerebral deficit or shock.

Occasional observers describe a chronic *cerebral arteritis* accompanying rheumatic fever which may explain certain subsequent epileptic and psychiatric disorders. The incidence of epileptic disorder is more frequent in patients with mitral stenosis than in the general population. The scarring of single or recurrent cerebral embolism is usually accepted as causal. (Baker, C. G., Foster, D. B., Pernot).

Enlarged left atrium and dilated left pulmonary artery may provide entrapment of left recurrent laryngeal nerve against aorta and ligamentum arteriosum.

Neurologic Complications of Medications Used in Heart Disease

Antihypertensive medications uncommonly lead to hypotension from overtreatment or compounding of several hypotensive-producing factors as additive medications, hypovolemia or hyponatremia. *Quinidine* produces syncope in sensitive individuals by producing cardiac arrhythmias.

Digitalis toxicity characteristically produces visual disturbances with yellow and green visual scotomas; a toxic amblyopia may develop. Beyond this, and likely with greater toxicity, with deteriorating physical status and with multiple biochemical alterations, a broad spectrum of symptoms are blamed to digitalis: mental confusion, delirium, syncope, coma, convulsions, aphasia, ophthalmoplegia and nystagmus. (Gaultier, Mahoney, R. P., Moser, Robertson, D. M., Schliack).

Anticoagulants present the low incidence of risk of neural bleeding, subdural, intracerebral, subarachnoid, even intraspinal. Femoral neuropathy from retroperitoneal hematoma is also known.

A reverse complication has been noted, namely a patient on anticoagulants following myocardial infarction, subsequently (on two occasions) taken off anticoagulant, then developing transient focal cerebral ischemia, requiring resumption of therapy to prevent cerebral symptoms (Askey, J. M.).

With "diseases of medical progress" ever present, one may have to suspect all medications at times, particularly for overdose or idiosyncratic sensitivity. An infusion of lidocaine to control ventricular arrhythmia resulted in convulsions (Crampton). Patients susceptible to hypoglycemic blood levels (as following gastrectomy or with diabetes) may develop clinical hypoglycemia with propranolol (Kotler).

(References available from author).

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The Use of Pancreatin in Fat Embolism*

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IT is unfortunate that the term, fat embolism, implies the transport of particulate masses of fat of solid or semisolid states, to many physicians, rather than the condition of liquid oil droplets entering the circulation. The concentration in lung, then, if more severe and symptom producing, in brain and kidney are well documented.[1] Many believe that the major disturbances are the result of small vessel brain embolism. While fat embolism occurs in other states, as severe contusion of subcutaneous fat and burns, the commonest injury producing it is fracture of long bone with fatty marrow. It is in this circumstance that the clinical picture of fever, occasional petechial eruption, particularly about the axillae, confusion, and sometimes coma, with varying amounts of pulmonary cardiac difficulty is found.

There has been extensive investigation of the mechanism of production, methods of diagnosis and general import of this problem with the attention upon it focussed chiefly by pathologists, surgeons, and particularly orthopedists. Internists see older patients with fractured femur or humerus, who already have some cerebral vascular insufficiency, with increased trouble when fat embolism is added. This is a medical problem troublesome to nurses and dangerous to the patient.[2]

The unequivocal diagnosis of fat embolism can be made only by biopsy or at autopsy. It remains a strong clinical impression if suspected; if there is fat in the urine; if there is antecedent trauma of a type likely to be associated, and parts of the clinical picture exist. One must proceed on these bases.

Treatments have been many and varied. Some approaches have been in almost opposing directions with the use of alcohol and dextrose mixtures stated to increase emulsification of fat and diminish lipolytic activity[2] and the use of heparin and dextran to increase lipolytic activity.[3]

There is no disagreement as to correcting hypoxia, combatting shock, handling cardiac insufficiency, and giving general support.

On May 14, 1962, a 66 year old lady, who had total colectomy for ulcerative colitis in two stages some 13 and 10 years previously, sustained a fracture of the midshaft of the left femur. Initially, a Thomas splint with traction was applied immediately after admission; however, fragment position was not adequate, and on May 16, open reduction was done and lateral plate applied. Her temperature was 100° before operation and by the 18th, the second day after operation, it had risen to 102.8°. Fat was found in the urine on the 17th. On the 18th, 8 tablets of Viokase Q.I.D. were started and continued through the 19th and 20th. She was quite confused on the 20th but cleared quickly, temperature fell, and she improved markedly; other supportive measures were used.

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*Presented at the Nebraska Section of the American College of Physicians, Omaha, Febr. 27, 1971.

On October 14, 1962, a 56 year old man, a heavy consumer of alcholics, fell and sustained an oblique fracture of the proximal shaft of the right femur. Fat was reported in the urine on October 16 and 17, and not on October 18. Viokase, 4 tab T.I.D. was started on the 16th, then 8 tablets T.I.D. from the 18th through the 23rd. Open reduction with pin and long plate was done on the 18th. Maximum temperature level was 100.6° on the 21st. He did well.

A 92 year old lady received an intertrochanteric fracture of the right femur on May 15, 1967. Serum lipase on May 16 was 1.2 units before operation. She had repair with a pin and plate inserted about eight hours after admission. She seemed to have little reaction from the procedure. Approximately 60 hours later, she became quite confused, then developed slight fever. Viokase 9 tablets T.I.D. was started and the confusion diminished, being clear in about 30 hours. Her serum lipase rose to 1.8 units on May 22 and the Viokase was continued to May 27. We did not find fat in her urine; however, search was not as thorough as it should have been. She cleared well.

On November 27, 1968, the same lady sustained an intertrochanteric fracture of the left femur. Her initial serum lipase level was .05 units on November 27. She was started on Viokase 10 tablets T.I.D. on admission, and kept quiet with sand bag support to the left lower extremity. On December 2, recheck serum lipase was 0.9 units. Operative reduction with a pin and plate was done on December 3. She had no fever, and transient confusion on December 2. Viokase was continued until December 7. There was transient confusion on December 9, recurring for a few hours on each of the next two days.

This technique was used on several other patients. We established the policy of giving Viokase early and continuously with a few day period before operations, at least, if operation was needed and restarting as soon as oral intake was feasible after operation. Immobilization, of course, was important from the start.

The only ill effect noted was the production of diarrhea in one patient which cleared with cessation and recurred with repeated use. The patient was not one with fat embolism, however. There was complaint about the numerous pills.

The intent was to increase lipolytic activity of the blood plasma with the hope that it would so alter fat globules that they could clear capillaries and arterioles if lodged in these locations, and to alter them sufficiently so they would not be in a state to lodge in vascular channels. The hope was that a substance containing lipase could be given simply by mouth and accomplish an augmentation of the body's lipolytic activity.

One can produce measurable increase in serum lipase levels by giving Viokase in the doses used. This has been done in a few volunteers who had normal levels before ingesting the material. It has been shown that the patients with fat embolism who develop significant increases in serum lipase do better clinically.[4] One can speculate about the method of alteration of fat globules by increased lipolytic activity.

It has seemed contradictory to believe that patients did better with higher lipase levels and to incriminate fatty acids as breakdown products in producing local damage if fatty acids were increased by higher lipase levels.

If there is merit in the use of oral pancreatin it is probably greatest in prevention of serious difficulty. The problem in the severely injured who could not swallow would have to be circumvented by intubation and use of powder in suspension through the tube; I have not done this. It is also possible that combinations with other agents, as heparin, or heparin and dextran, as used by Evarts, could be more helpful in severe circumstances.

Summary

Pancreatin in the form of Viokase in a dose of at least 10 tablets T.I.D. or 30 tablets in a day has been used in fat embolism and it is suggested that increased lipolytic activity is associated in some way with benefit. It is possible that other compatible agents may be used with pancreatin. It is of greatest benefit when used early and prior to operative intervention.

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Treatment of Arrhythmias Associated With Acute Myocardial Infarction

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Significance of Arrhythmias

LESS than 10 years have passed since Doctors Day and Meltzer opened the first coronary care units and thus established a new era in the care of the patient with acute myocardial infarction. It has since been demonstrated that approximately 50% of all noncoronary care unit hospital deaths following acute myocardial infarction are due to primary disturbances of cardiac rhythm which are unrelated to the severity of myocardial damage. Coronary care experience has shown that immediate and vigorous therapy of premonitory disturbances of cardiac rhythm will prevent the occurrence of more severe disturbances of cardiac rhythm, unexpected primary cardiac arrest, and primary arrhythmic deaths. At the present time, the prompt diagnosis and immediate therapy of disturbances of cardiac rate and rhythm remains the basic principle of cardiac care.

The loss of ventricular mass secondary to infarction, and the concomitant loss of ability to vary stroke volume significantly, account for the poor tolerance and profound hemodynamic consequences of arrhythmias in patients with acute myocardial infarction. Congestive heart failure, hypotension, and further reduction of coronary blood flow are often secondary to arrhythmias. Inappropriate heart rate, loss of the atrial contribution to ventricular filling, and an abnormal sequence of ventricular activation are the mechanisms by which various arrhythmias may cause deterioration of hemodynamic function.

Approach to Therapy

Just as arrhythmias may result in hemodynamic impairment, so may they be secondary to ventricular dysfunction and related metabolic abnormalities. Attention must be directed to correction of those conditions predisposing to the arrhythmia if therapy is to be successful. Hypoxia, acidosis, alkalosis, hypokalemia and other electrolyte abnormalities, congestive heart failure, digitalis toxicity are a few of the more common conditions to which attention must be directed.

The Tachyarrhythmias

The tachyarrhythmias are associated with increased myocardial oxygen consumption, impaired ventricular filling, elevated left atrial pressure, and reduced cardiac output. Although it is often difficult to differentiate between rapid supraventricular and ventricular rhythms, the prime consideration in therapy is slowing of the ventricular rate.

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Immediate control is mandatory when the tachyarrhythmia results in further deterioration of the hemodynamic function. In the absence of digitalis toxicity or AV block, DC cardioversion is the treatment of choice.

Ventricular tachycardia is an acute emergency in the patient with myocardial infarction. Intravenous lidocaine is the drug of choice for suppression of ventricular rhythms. Pronestyl is also effective both for the treatment and prevention of recurrences of ventricular dysrhythmias. Other drugs which have been successfully used include quinidine, dilantin, bretylium, and propranolol. Dilantin and propranolol appear to be most effective for those ventricular dysrhythmias secondary to digitalis toxicity. Immediate DC cardioversion is indicated in the presence of circulatory insufficiency. On occasion, overdrive pacing is necessary to suppress recurrent tachyarrhythmias refractory to pharmacologic therapy.

Ventricular premature systoles must be considered premonitory indicators of more severe ventricular tachyarrhythmias. Effective drug therapy should be started when these are first noted in the hopes of preventing ventricular tachycardia or ventricular fibrillation. Lidocaine again appears to be the drug of choice with pronestyl second.

Supraventricular tachyarrhythmias with rapid ventricular rate and hemodynamic impairment should in the absence of digitalis toxicity be immediately treated with DC cardioversion. If the arrhythmia is well tolerated, an initial trial of digitalis therapy is indicated. Digitalis and/or quinidine may then be used to prevent further recurrences. Atrial premature systoles usually precede the onset of atrial fibrillation, atrial flutter, or atrial tachycardia, and therefore should be eliminated with digitalis or quinidine if possible, in the hopes of preventing the development of the tachyarrhythmia.

The Bradyarrhythmias

The bradyarrhythmias may be related to either sinoatrial or AV nodal dysfunction. Since with acute myocardial infarction there is loss of the ability to significantly vary stroke volume, reduction of heart rate results in decrease in cardiac output. Almost two out of every three patients with acute inferior myocardial infarction present with a bradyarrhythmia if seen within the first hour following infarction. Most of these patients respond promptly to the intravenous administration of IV atropine in a dosage of 0.5 to 2.0 mg.

AV block may occur within the AV node or distal to the AV node in the subnodal conduction system. Intranodal block is usually associated with inferior infarction, a narrow QRS complex due to an AV junctional pacemaker, and gradual transition from 1st degree to Wenckebach to advanced AV block. The prognosis of intranodal block is good with only a small percentage of the patients requiring pacing.

Subnodal block is usually associated with anteroseptal infarction and is due to bilateral bundle branch block. The QRS is wide due to an idioventricular pacemaker. AV block is usually sudden in onset, frequently being 2:1 or complete at time of onset. Wenckebach rhythm is not seen. Prognosis for survival is poor due to associated power failure. Patients who develop bundle branch block or hemiblock must be recognized as having subnodal conduction problems with high risk for sudden complete AV block. Artificial ventricular pacing should be considered early in these patients, and prolonged or permanent pacing is frequently necessary.

Because of its tendency (1) to produce ventricular arrhythmias and (2) to increase myocardial oxygen consumption, isoproterenol should be used only temporarily pending placement of a transvenous right ventricular catheter and institution of effective pacing.

Conclusion

The immediate recognition and prompt therapy of disturbances of heart rate and rhythm remains the most effective contribution to the welfare of the patient with acute myocardial infarction.

President's Page

During the month of December our lives are filled with the story of Christmas and every Christian celebrating the birth of his own personal Saviour. The season of Advent anticipates the fulfillment of God's promise with the birth of the Messiah, and reminds us all of our need for personal salvation. Many times we will hear the story of the virgin birth in the stable, the story of the wise men, and the story of the shepherds in the field. Recognizing the importance of this great event, I would stress the point that the Bible contains many stories of value in our daily lives and as an example suggest the first miracle Christ performed, changing water into wine. We read the account of this event in John 2:6-11.

In reading the Bible, filled as it is with excerpts, parables, and descriptions, we must regard each of these as signs for our lives as well as tales of certain events. There are many lessons to be derived from the story of the marriage feast at Cana, but I would emphasize the point that the water was changed into wine, not destroyed and replaced by wine. Jesus used the material at hand to fulfill a need and transformed it into a new entity. Herein lies a great lesson particularly appropriate to medical care in America today.

Medicine today finds itself facing changes both in socio-economic and scientific areas. Our medicines, our surgical procedures, our laboratory studies, etc., are all vastly different from those used even five to ten years ago. Likewise, economic factors have changed with the effects of inflation, government programs, union bargaining, and third party carriers. Social changes are also rampant it seems, with such issues as abortion, welfare reform, and drug abuse constantly bombarding our old standards.

Any physician would readily admit that our present level of scientific achievement is far from complete let alone ideal. Likewise, most of us could agree that our social and economic accomplishments are far from ideal. However, it must be stressed that nothing can be accomplished by destroying what we have created. The way to the future is clearly marked by building on our heritage, not destroying our past and trying to create a new entity. This is just as true for socio-economic issues as it is for Scientific achievement.

Let us all strive to change the water (our 1971 level of life) into the "good wine" of the future of medicine in America.

My wife Myrtle, my children Eric, Karen, and Denise; and I would like to wish all of you a Blessed Christmas and Happy New Year.

Roger Mason, M.D.

WashingtoNotes

Health insurance

The long awaited public hearings on the various proposals for national health insurance before the House Ways and Means Committee are now underway. Some 200 organizations and individuals are expected to testify during the scheduled six weeks of hearings.

Lead off witness was HEW Secretary Elliot Richardson who revealed an entirely new proposal "to tighten controls on provider costs and inefficiencies." In the 38-page statement, Richardson was highly critical of the Kennedy-Labor Bill.

"In order to help the consumer become a prudent buyer in the medical care market and to protect the consumer against unnecessary increases in health care costs, we shall propose the following provisions:"

—The states shall require health insurance companies to inform prospective policyholders as to benefits, exclusions, premium costs and delivery system choices.

—The states shall require providers to inform the public as to charges for standard items and other patient access matters.

—We will establish on an experimental basis local quality review organizations composed of outside medical experts, including non-providers in some instances.

—We also propose to require NHISA carriers to apply control measures and statistical reporting measures in accordance with Federal guidelines, such as strict review of utilization of health care services. Specific plans for implementation with regard to wages and prices will be developed in conjunction with the Committee on the Health Industry established by the President under Phase II of his new economic policy.

—State planning agencies will be required in cooperation with area-wide planning agencies and as a condition of Federal grant support and approval, to identify geographic areas of physician and facility oversupply. States are to develop and apply detailed criteria based on Federal guidelines, and publish this information.

Under the proposed insurance company regulations, Richardson said:

"We intend to secure agreements with states under which the states will

—Require annual, independent audits of participating insurance companies.

—Create state health insurance insolvency mechanisms. A Federal mechanism will also be established for use if a state fails to act satisfactorily.

—"File and use" procedures for premium rates under NHISA insurance contracts, with authority to disapprove extraordinary rates.

—Require disclosure by insurers of their administrative expenses as a percentage of premiums.

—Create state insurance pools, on a statewide or sub-state basis open to small employers, the self-employed, and those who are not employed, but are ineligible for Federally-financed health programs."

Richardson said he was certain the hearings "will culminate in a national health insurance program." The Administration's plan avoids the danger of two extremes — proposals that do little to alter the present system and proposals to substitute a monolithic Federal scheme, he declared. Richardson said proponents of the Kennedy-Labor Bill "seem to assume that radical intervention by the Federal Government in health care, in an inflexible, predetermined and monolithic manner, is the only way to solve health organization and delivery problems." He estimated it will cost $60 billion in new taxes.

The American Medical Association's Medicredit and the Health Insurance Association of America's plan also were criticized. The major shortcoming in both, said Richardson, "is the great unlikelihood of achieving universality in protection."

AFL-CIO President Meany told Committee members that "Labor will vigorously oppose" any efforts to dilute its plan for national health insurance.

"I hope and firmly believe that we won't have to come back in the next Congress," Meany said. "But, if we have to, we will come back again and again until the Health Security Program is enacted. And, if we have to, we will take this issue to the people in the elections of 1972."

Meany blasted the national health insurance proposals of the Administration, the health insurance industry, and the AMA — saying they "would all just pour new money into the present health care delivery system which is a failure."

The American Farm Bureau Federation urged caution against the creation of "a powerful bureaucracy of great scope" and the National Federation of Independent Business came out flatly against any compulsory insurance system.

The American Farm Bureau Federation urged caution against the creation of "a powerful bureaucracy of great scope" and the National Federation of Independent Business came out flatly against any compulsory insurance system.

The American Public Health Association called for a broad national program with heavy emphasis on speeding development of pre-paid group plans. The goals set forth by James Kimmey, APHA Executive Director, fit the labor bill more than any other proposal, but the association did not endorse a single measure.

Equitable Life Assurance Society President, J. Henry Smith, accompanied by Daniel Pettengill and Ardell T. Everett, presented the combined statement of the Health Insurance Association of America, American Life Convention, Life Insurance Association of America, and Life Insurers Conference.

The National Association of Insurance Commissioners urged preservation and expansion of the existing system of private health insurance and recommended utilization of the state insurance regulatory mechanism rather than a new federal one.

The American Dental Association said any National Health Program should start out with a dental component that concentrates on preventive services for children. Any program approved should include dental benefits. The same stand was taken by the American Society of Oral Surgeons.

Leonard Woodcock, President of the United Auto Workers Union, told the Committee "it is time to cancel the insurance industry" and impose a national health insurance program operated by the government.

Pharmacists represented by the American Pharmaceutical Association urged the Committee to include drugs in any health insurance plan. The Committee is not expected to act on health insurance legislation until next year.

William G. Battaile, President of the American Association of Blood Banks, asked that no coverage be provided to pay for blood transfusions. He contended that payments would encourage greater use of commercial blood banks and increase the risk of hepatitis.

Financial aid

Expected to be signed into law shortly, is health manpower legislation that will authorize an estimated 2.9 billion dollars in aid to health profession students and their schools in the next three years — and provide the facilities and programs to close the manpower shortages in the health professions within seven years.

Medical schools would receive $11,500 for the full-term cost of training each student. Each school would receive $2,500 per student per year for the first three years of training. The grant rises to $4,000 for the year of graduation. In order to encourage swifter training, three year schools would receive $13,500 based on $2,500 for each of the first two years and $8,500 for the third year.

Each school would be required to enroll an additional five per cent of students, or five students . . . which ever is the greater . . . to qualify for assistance. An extra $1,000 a year would be awarded schools for each student exceeding this total. The legislation will also help establish at least five new medical colleges.

Additional authorizations would provide $270 million for health manpower education initiative awards to alleviate manpower shortages and to train new types of personnel, and $412 million for special project grants for programs in family medicine, physician assistant training, and others.

Cancer

House opposition to a Senate-passed cancer bill that would tend to fragment the National Institutes of Health has touched off a debate in Washington as to how best to organize a multimillion dollar campaign to conquer the disease. The American Cancer Society has sponsored a number of full-page ads about the nation calling for popular support of the "put-a-man-on-the-moon" approach to the conquest of cancer as contained in the Senate bill.

It is reported here that the Cancer Society ads are just the opening salvo in a "big money" grass roots campaign to pressure the Congress into passage of the Kennedy-Administration backed "Conquest of Cancer" bill. A month ago the AMA's testimony on this bill challenged the wisdom of separating cancer research from the mainstream of bio-medical research now carried on by the NIH.

Cost committee

President Nixon formally established a committee on the health services industry to furnish advice on ways to keep health costs from climbing too rapidly. In an executive order, the chief executive said the committee — which is expected to consist of about 15 members — "shall provide advice concerning special considerations that tend to contribute to inflation in the health services industry."

Down Memory Lane

1. The patient should not be allowed to sit up in bed until seven days after the temperature is normal.

2. It has long been known that cases of infantile eczema may terminate in sudden death.

3. Handling a patient's "nerves" is a part of the doctor's job. He is shirking if he tells the patient: "If you don't follow my directions I cannot do anything for you!"

4. The mortality of Cesarean section in the United States is much higher than that of other comparable laparotomies.

5. I did not know her, because she was in the full bloom of health, and nothing did it but her pessary.

6. The basal matabolic rate furnishes an accurate index to the success of therapeutic agents, medical, X-ray and surgical, in thyroid disease.

7. As you all know, there is a great movement on foot throughout the country toward compulsory health insurance.

8. It is to be hoped, however, that as time goes on, the care of the injured and crippled in the United States will follow the newer lines of orthopedic reconstructive surgery.

9. There has been general complaint from the profession that business is dull, "rotten."

10. I should like to see the State Association give its hospital committee the power and work to have that power backed by the State Legislature to enforce higher standards of medical and surgical efficiency in the hospitals of this state.

Nebraska State Medical Journal
December, 1921

Woman's Auxiliary

To Every Nebraska Physician's Wife:

This may be the most important year in the history of American medicine. This is the year some kind of national health insurance will be provided through legislation in Washington. As doctor's wives, we will be asked questions concerning the different proposed plans, their coverage, funding, and implementation.

We Need to Know the Answers:

For quick reference, read pages 20 and 21 of the July M.D.'s Wife. Informative material from national was reproduced and sent to each organized auxiliary, together with a copy of "Medical and Health Care for All," a booklet prepared by AMA. Copies can be secured through the State Association office in Lincoln. Read this and read it again.

A speaker's bureau has been formed and our auxiliaries should have a legislative program; if a speaker is secured, wouldn't it be a good idea to ask guests, particularly wives of members of the allied professions?

By the time you read this, a great many of you will have seen the slides and listened to the sound track explaining Medicredit. This presentation takes only 15 minutes and could be presented by any one of us to the members of the various organizations to which we belong.

The legislation setting up national health insurance will vitally affect each individual in this country. We can help a great many people understand what good national health insurance should cover, if we are well informed and knowledgeable ourselves.

A good health plan SHOULD *NOT*

1. result in reduced quality of medical care due to unreasonably increased demands;
2. be unreasonably expensive;
3. promise more than can be produced,

but *SHOULD*

1. allow physicians to regulate themselves;
2. be voluntary;
3. separate medical and institutional components;
4. set up a cost and quality review mechanism, using professional review principles at local level;
5. maintain state licensure and certification;
6. have government subsidy or assistance related to individual's ability to pay;
7. be responsive to needs of the under privileged.

MEDICREDIT covers basic health care (the cost based on amount of income tax paid) and catastrophic illness (the cost paid 100% by the federal government); thus, each individual would contribute according to his ability to pay and the *voluntary* system of health care, allowing *free choice* of insurance company and physician would be continued. 158 senators and representatives are now cosponsoring Medicredit.

Remember, LETTERS DO HELP. While Nebraska does not have a member on the Committee, a letter to any or all of the following (members of the committee) setting forth the points you favor in a national health plan (rather than specifically mentioning one plan) is welcomed.

Wilbur Mills (D), Arkansas, Chairman
Al Ullman (D), Oregon
Martha Griffiths (D), Michigan
Phil Landrum (D), Georgia
Richard Fulton (D), Tennessee
James Corman (D), California
Sam Gibbons (D), Florida
Joe Waggonner (D), Louisiana
Jackson Betts (R), Ohio
Harold Collier (R), Illinois
Barber Conable (R), New York
Jerry Pettis (R), California
Donald Brotzman (R), Colorado
James Burke (D), Massachusetts
Dan Rostenkowski (D), Illinois
Charles Vanik (D), Ohio
Omar Burleson (D), Texas
William Green (D), Pennsylvania
Hugh Carey (D), New York
John Byrnes (R), Wisconsin
Herman Schneebeli (R), Pennsylvania
Joel Broyhill (D), Virginia
Charles Chamberlain (R), Michigan
John Duncan (R), Tennessee
Joseph Karth (R), Minnesota

Mrs. P. Bryant Olsson, Chm.,
Legislative Committee,
Nebraska Woman's Auxiliary,
AMA

Our Medical Schools

Dr. Shaddy appointed at Creighton

Dr. Raymond W. Shaddy has been appointed to the newly created post of associate vice-president for planning in Creighton University's health science complex. Formerly the dean of Creighton's School of Dentistry, Dr. Shaddy assumed his new duties Nov. 1.

As the university's first associate vice-president, Dr. Shaddy will help to plan, coordinate and implement new health-oriented programs. A major portion of his new job will involve liaison activities between governmental agencies and Creighton's four health science schools.

In announcing creation of the new position, Creighton's president, Rev. Joseph J. Labaj, S.J., cited development of coordinated health science education and service programs. These academic areas, he noted, were given great impetus during Creighton's recent $100-million Centennial Thrust development campaign.

"Medicine, dentistry, pharmacy and nursing are experiencing dramatic improvements," he said, "with more to come. A new $10-million School of Dentistry is under construction; federal assistance for a $7-million Medicine-Pharmacy building (Unit III of the Criss Medical Center) has been approved; Nursing has risen from a department to the status of a college, and a $50-million teaching hospital will be built on campus to form the core of Creighton's Regional Health Center," he added.

"We also have major faculty and curriculum development programs underway in the health sciences," Father Labaj said. "Such dramatic advances require top-level administrative talent, and we feel fortunate that a man of Dr. Shaddy's capability has agreed to serve the university in this demanding capacity," he said.

In addition to his work on academic programs and constructive grant applications, Dr. Shaddy will monitor the various avenues of federal institutional support, according to Dr. Robert Heaney, vice-president for health sciences. He said this could enable Creighton to receive an additional million dollars in governmental funding during the coming year. Federal support, excluding research grants, last year amounted to $1.5 million, he said.

Dr. Heaney said that an acting dean of the School of Dentistry will be named and a search committee will be appointed to find a successor to Dr. Shaddy.

Dr. Shaddy, 48, was educated at Creighton Prep and Creighton University, earning his Doctor of Dental Science degree in 1953. He joined the faculty three years later, and was named dean of the School of Dentistry in 1962.

Rehabilitation, hospital management, and family practice

1. A course on utilization of rehabilitation services will be conducted at the University of Nebraska Medical Center January 24 and 25. In addition to a team from the social rehabilitation center at the Medical Center, the faculty will include a social worker from Denver.

Invitations have been sent to social workers, vocational rehabilitation counselors, nurses and doctors.

Sessions will be held in the auditorium of the Basic Science Building of the Medical Center.

2. In January the Medical Center, in cooperation with the Nebraska Hospital Association, will begin a series of twelve long-distance telephone seminars devoted to hospital management.

The programs will be presented on the second and fourth Mondays of each month, beginning January 10 and ending June 26.

The current cost for the programs is $25 per conference, plus a ten-dollar installation charge and a monthly charge for receiving equipment.

Hospitals interested in joining the network are asked to contact the department of continuing education at the University of Nebraska Medical Center.

3. March 6 through 17 has been set for the course designed to prepare family physicians for the examination of the American Board of Family Practice. Pre-registration is required for the comprehensive review of medicine. Tuition is $400.

American aging association at U of N

Representatives of communities throughout Nebraska met at the University of Nebraska Medical Center October 21 to formulate plans for a state affiliate of a new national lay-scientific organization, American Aging Association (AGE).

The infant organization, patterned after the American Heart Association, was chartered in Nebraska last year. Its goal is to help people live better longer through education and research.

The organizational meeting was initiated by Fred P. Curtis, Omaha.

Guests heard Dr. Cecil L. Wittson, chancellor of the University of Nebraska Medical Center, and Dr. Roger Mason, president of the Nebraska State Medical Association, who stressed the value of grassroot community support of medical progress.

Dr. Denham Harman, professor of internal medicine and of biochemistry at the Medical Center, is president-elect of AGE. He cited the need for a new health organization.

This organization differentiates between social services or care of the aged — the direction taken by most existing agencies — and studies of the aging process, a factor underlying our major medical problems, according to Dr. Harman. "Humans are aging from the day they are born," Dr. Harman stated. "But through education and research, good medical care and health habits, we now know it is possible to extend the functional life span of man. These 'preventive or prophylactic' aspects of aging should be of tremendous interest to young-middle aged Americans who may benefit the most."

State affiliates have been incorporated in four states. Seven others are in the process of incorporation.

Directors of AGE include: Harold Brody, Ph.D., M.D., professor and chairman of the department of anatomy, State University of New York at Buffalo School of Medicine; Florence S. Mahoney, Washington, D.C.; Morris Rockstein, Ph.D., professor of physiology and radiology, University of Miami; Paul Glenn, president, Glenn Foundation for Medical Research; and F. Marott Sinex, Ph.D., professor and chairman of the department of biochemistry of the Boston University of Medicine.

Further information on AGE may be obtained from the national office of AGE, in care of the University of Nebraska Medical Center, Omaha, Nebraska 68105.

Speech and hearing

The C. Louis Meyer Children's Rehabilitation Institute's speech pathology division has received accreditation of its services by the American Speech and Hearing Association. The speech section is a part of the division of audiology and speech pathology of the University of Nebraska Medical Center.

Accreditation of speech and hearing service programs is part of the 13,000-member American Speech and Hearing Association's project to maintain high nationwide standards.

The speech pathology program at Meyer Children's Rehabilitation Institute includes both speech and language assessment and therapy for the multiply involved child.

Creighton appoints Vining

Dr. Robert V. Vining has been named acting dean of the Creighton University School of Dentistry, succeeding Dr. Raymond W. Shaddy who moved to the post of associate vice president for health sciences for planning. Dr. Vining's appointment, which was effective Nov. 1, was made by Creighton president Rev. Joseph J. Labaj, S.J.

Dr. Vining currently serves as director of the division of Adult Restorative Dentistry. He taught operative dentistry in the Creighton Dental School from 1955 through 1958 at which time he became director of research and development in the Dental Division of the Howmedica Company in Chicago. He rejoined the Creighton faculty this fall.

A native of Sioux City, Ia., the 51-year-old educator received his bachelor's and D.D.S. degrees from the State University of Iowa. He also served as an instructor there from 1952 to 1955.

Dr. Vining is a member of the American Dental Association, the International Association of Dental Research and the American Academy of Plastics. He has published several articles and authored two films on new clinical concepts of dentistry.

Dr. Shaddy has served as dean of the Creighton Dental School since 1962. A search committee to find a permanent successor to the post will be appointed later, according to Dr. Robert P. Heaney, vice president for health sciences.

New O & G chairman at U of N

Dr. Robert Messer has been named chairman of the department of obstetrics and gynecology at the University of Nebraska Medical Center. He was also promoted to full professor.

A member of the faculty since 1963, Dr. Messer was named an assistant professor in 1965 and an associate professor in 1968. In 1969 he was named an assistant dean for graduate education.

From 1961 to 1963 Dr. Messer was chief of the department of obstetrics and gynecology at the hospital at Wurtsmith Air Force Base in Michigan.

A 1956 cum laude graduate of the University of Michigan Medical School, Dr. Messer served his internship and residency at the University of Michigan Hospitals. Dr. Messer took his undergraduate work at the University of Wisconsin.

Dr. Messer succeeds Dr. Warren Pearse who has resigned to become dean of the Medical College of Virginia.

U of N accredited

The University of Nebraska Medical Center has received notification from the Joint Commission on Accreditation of Hospitals that three of its component institutions have received accreditation from the JCAH.

University Hospital and the Nebraska Psychiatric Institute have received notice of their continued accreditation.

For the first time the Hattie B. Munroe Pavilion has received accreditation — as an extended care facility.

The accreditation is for a two-year period instead of a three-year period earlier in practice.

Creighton names Dr. Organ

Dr. Claude H. Organ, acting chairman of the Department of Surgery at Creighton University's School of Medicine, has been named permanent chairman of that department. The announcement was made jointly by Dr. Joseph Holthaus, dean and Thomas L. Flickinger, executive director of St. Joseph Hospital.

Dr. Organ was named acting chairman of the department July 1, succeeding Dr. Fletcher Miller.

Dr. Organ received a bachelor of science degree from Xavier University of New Orleans in 1948 and earned his medical degree from Creighton in 1952. He also holds a master of science degree in surgery from Creighton.

A native of Marshall, Texas, Dr. Organ joined the Creighton faculty in 1959 as an instructor in surgery and later became associate clinical professor and full professor.

His contributions to surgical literature include original publications in all of the major surgical journals.

U of N assistant to the dean

Kenneth L. Shearer has been named an assistant to the dean of the University of Nebraska College of Medicine. Mr. Shearer will handle community relations for the College, according to Dean Robert Kugel. The dean noted that Mr. Shearer has a background in community affairs related both to health and community planning which admirably suits him for the position.

Mr. Shearer has been a vice president of Welcome Radio in Omaha since he resigned as executive director of the Greater Omaha Community Action Program in 1970. He came to Omaha in 1966 following two years as associate director of the Erie County Anti-Poverty Agency in Buffalo, New York.

A graduate of Ohio State University, Mr. Shearer received his master's degree from the University of Pittsburgh in 1964.

The Letter Box

To the Editor:

It was very interesting to hear Dr. Koefoot's explanation of the Broken Bow project at the annual meeting of the Nebraska Chapter AAGP. However, it is somewhat controversial as it appeared in the October issue of the Nebraska State Medical Journal. We were told at this meeting by Dr. Koefoot that this was a private and free enterprise project which eased the minds of everyone there. Yet the article states that the University will help to obtain grants etc., for supporting the program as well as assistance from the Federally financed NOVA project. It was also stated at the meeting and in the article "the project will in no way interfere or conflict with the private practice of medicine." The conflict appears real to many of us as follows:

The surrounding communities of Sargent, Burwell, Ord, and Loup City already have adequate facilities which are providing quality health care with a full range of medical services and doing so at their own expense in a free enterprise system on a local basis. Yet this proposed pilot project states that its primary goal is the same with the exception, however, that they propose to do this by asking for our tax money which is using the surrounding communities' tax resources to provide a project which should be done entirely on a local basis as all of the other communities in the area have done.

Several aspects of this program appear to be superfluous in that the purpose stated such as:

a. "The development of a demonstration system for making health services more available and acceptable in a representative area" is already being done.

b. "Re-educate health care providers and consumers toward more efficient use of health resources available." All of the doctors and patients in this area are aware of what resources are available here.

c. "Give special attention to persons disadvantaged by disability, . . . etc." This is already being done by other agencies. Also stated in the article is the fact that the University will make available some faculty members who will have access to the Community Hospital facilities. This is a very broad statement and carries some rather grave implications in that the faculty would include residents who could under this interpretation, schedule elective procedures and consultations which might otherwise be referred to specialists in the surrounding larger communities, thereby creating a Federally financed project to compete with established referral specialists in the area. I am not making the statement nor an accusation that this is the case. However, this interpretation could easily be applied to the above statement.

It was not mentioned at our meeting by Dr. Koefoot nor by Dr. Land that a 5½ million dollar grant had been applied for by the University to support this program. It is quite curious to most of us why this rather significant fact was left out and why the concentration on selling the idea that this was a private, free enterprise project. The grant was applied for through the National Institute of Health and denied and then apparently reapplied for through another Federal agency.

One statement must be clarified and put into perspective, that being "the model rural health center will be one of about seven NOVA projects in the State." I submit that we should be very honest about this and call it exactly what it is — a Regional Medical Care Center exactly as those found in the iron curtain countries by those of us who have visited them.

By saying in the article that "Until recently, educational policy has never allowed innovative programs to provide physicians-in-training with a deeper understanding and awareness that medical disaster is often a result of social disintegration," an inference has been made that doctors previously have not had a social consciousness and have not been adequately prepared to meet health needs. These ideas are entirely fallacious.

R. I. Westbrook, M.D.

To the Editor:

Thank you for giving me the opportunity to respond to Doctor Westbrook's letter concerning my article "A Pilot Program in Rural Health Care."

It is quite evident that Doctor Westbrook is not in the least interested in increasing the supply of physicians and ancillary personnel or to the upgrading of services in the rural areas. Thus, any further comment by me would be superfluous.

Sincerely yours,
Theo. H. Koefoot, M.D.

To the Editor:

We would like to take this opportunity to thank the Nebraska State Medical Association for hosting our attendance to the Fall Meeting of the House of Delegates in Kearney October 23rd and 24th. The general meetings and committee meetings were very informative, and we hope to carry what we learned to all Creighton medical students. The adoption of the by-law change allowing student and house-staff societies with delegates holding voting membership in the House of Delegates is a significant step toward improved communications. There are numerous ideas generated and problems encountered by medical students and house staff which should be of interest to the entire medical community. Through such associations between students and practicing physicians we will benefit through your involvement in our problems and training and we feel you will benefit through our input of new ideas and approaches. Space does not permit us to comment on every action undertaken by each reference committee, but we were impressed by the overall concern and dedication of all who contributed.

Thank you again for inviting us to participate during the Fall Meeting.

Sincerely,
John Motl
Paul Montague
Michael Moreland

To the Editor:

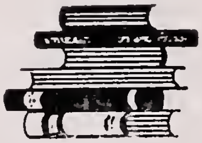
The University of Miami Law Center and School of Medicine are proud to announce the forthcoming MEDICAL MALPRACTICE, A LEGAL COURSE FOR DOCTORS, which will take place March 1-4, 1972 at the Americana Hotel, Bal Harbour, Florida. The purpose of the seminar is to give to doctors and hospital administrators an in-depth introduction to their legal rights and duties in relation to their patients. Taught completely by lawyers, it will be a non-adversary, factual, legal and practical presentation for the purpose of education.

Inquiries for further information should be addressed to:

IV Medical/Legal Institute
University of Miami Law Center
P. O. Box 8087
Coral Gables, Florida 33124

Sincerely yours,
(Mrs.) June R. Sinkes
Exec. Dir., Law Center

Books



Anglo-American Conference on Medical Care. This is a compilation of the proceedings of a conference sponsored jointly by the Royal Society of Medicine and the Royal Society of Medicine Foundation, Inc., held in London, April, 1971; 130 pages, 7″ by 9¾″. The Royal Society of Medicine, 1 Wimpile Street, London, WIM 8AE, 1971, $5.00; additional charge for second class airmail to USA $2.00; paperback.

There were 56 speakers, British and American; there are six sections: The Setting, Organized Medicine, Delivery of Care, Problems of Specialization and of Training, the Ideal and the Attainable, and The Consumer; the sections are broken up into 23 different topics.

The conference lasted three days; the talks were good; there is much discussion; unfortunately no index is furnished, but it is timely, easily read, and worth the five or seven dollars (two pounds in England). The articles are nice and short, and the type is excellent.

—F.C.

Fundamentals of Athletic Training, a joint project of the National Athletic Trainers Association, the Athletic Institute, and the Medical Aspects of Sports' Committee of the AMA, 6″ by 9″ in paperback, 1971, 128 pages, $2.00; write to the AMA.

The book has tables, figures, and pictures; it tells you how to apply tape; and discusses fitness, nutrition, mental readiness, conditioning, and first aid. There's a need for a book like this, and this fills the need; I wish it had an index.

—F.C.

(Left to right) — Roger D. Mason, M.D., President; Harry W. McFadden, Jr., M.D., Vice Speaker of the House of Delegates; C. R. Brott, M.D., Immediate Past President; Milton J. Hassel, President, Kearney State College, Primary Speaker for the Prayer Breakfast.

Picture Gallery

From the Fall Meeting, NSMA, Kearney, Nebraska, October 22-24, 1971.

The Law

HMO hearings continue

The Senate Subcommittee on Health resumed hearings on bills which would assist in the development and operation of Health Maintenance Organizations. Andrew J. Biemiller, testifying on behalf of the AFL/CIO, supported the use of public funds to stimulate the development of HMO's, but he expressed reservations regarding all of the currently pending bills. The witness particularly objected to the use of public funds to support profit making health enterprises and to measures which would subject individual HMO plans to the approval of state planning agencies. He further stated that an ideal bill would give priority for public funding to HMO's sponsored by consumers or by community organizations. Mr. Biemiller concluded by saying, "A good HMO bill, adequately funded, will provide the organizational structure upon which to build a national health program. It will be part of the tooling-up process for National Health Security."

The second witness to appear before the Subcommittee was Robert M. Heyssel, M.D., Associate Dean for Health Care Programs, Johns Hopkins University School of Medicine. Dr. Heyssel, appearing on behalf of the Association of American Medical Colleges, said that if the HMO is to emerge as one of the prominent organizations for delivery of health care in the future, it is essential that HMO's become one of the educational settings for medical students, interns, residents and other health professionals. Asserting that academic health centers have well known competence in the fields of biomedical research and immediate access to universities and their resources in the social sciences, Dr. Heysel said that academic health centers would be able to bring much additional knowledge and skill to bear upon problems in health care delivery. He recommended that financing for HMO programs should be sufficient to assure flexibility for experimentation in the full range of settings in which academic medical centers exist. He called for full funding for the planning, development, and early operational phases of HMO's.

Paul M. Ellwood, Jr., M.D., Executive Director of the American Rehabilitation Foundation, appeared before the Subcommittee. Noting the growth of prepaid group practice across the country, Dr. Ellwood offered two immediate recommendations. First, he called for a short-range HMO development act to provide immediate assistance to such groups. His proposal would provide planning funds to support their development together with federal authority voiding any state restrictions against such plans. Dr. Ellwood's proposal would also require optional HMO coverage in all employer-employee health care plans. Second, in order to assure quality care in HMO's, he recommended the establishment of a regulatory agency which would enforce standards of quality and otherwise assist in the growth and development of HMO's. The agency would have broad regulatory powers including authority to reduce reimbursement, levy fines, or decertify HMO's for reimbursement by federally financed or mandated health insurance programs.

James R. Kimmey, M.D., appearing on behalf of the American Public Health Association, outlined a national health care program to provide comprehensive benefits for all residents of the United States financed by a combination of federal social insurance and general tax revenues. The program, according to Dr. Kimmey, would be designed to change all aspects of the national health care delivery system. HMO's would be considered in the light of the overall objectives of the plan, and they would be required to provide, as a minimum, preventive services, primary physician care, specialist care, unlimited hospitalization and complete dental care. He described the HMO as an important positive step toward a more rational approach to health care, but warned that it is only one of a number of steps required to deal with the problems of health care delivery.

Joseph L. Dorsey, M.D., Director of Medical Planning in the Harvard Community Health Plan, discussed the program offered by the HCHP and explained the problems involved in developing a prepaid group practice program. He emphasized the problems of generating membership and financing the program. After stating that HCHP incurred $600,000 in program planning cost and will incur an operating deficit of almost $2 million, Dr. Dorsey said, "We fear that HMO's for 10,000 or 20,000 members will not prove viable unless they happen to be part of a system of larger units or are heavily subsidized for an indefinite period."

Conferees agree on manpower bill

House and Senate conferees have reached agreement on the provisions of H.R. 8629, the Comprehensive Health Manpower Training Act of 1971. The bill authorizes a total of some $2.8 billion to be appropriated over fiscal years 1972, 1973, and 1974 for the health manpower programs. Although the conference report has not yet been officially released, the following programs and authorizations (in millions) are expected to be provided:

—Grants for the construction of research and teaching facilities — $225, $250, and $275.

—Interest subsidies for construction of teaching facilities — $8, $16, and $24.

—Institutional support — capitation grants for schools of medicine, osteopathy, and dentistry — $200, $210, and $231; for schools of veterinary medicine, optometry, pharmacy, and podiatry — $34, $37, and $41.

—Grants for new schools of medicine, osteopathy and dentistry — $10, $10, and $10.

—Special project grants and contracts—$118, $138, and $156.

—Grants for schools in financial distress—$20, $15, and $10.

—Health manpower education initiative awards — $45, $90, and $135.

—Student loans — $50, $55, and $60.

—Grants for health professions teaching personnel — $10, $15, and $20.

—Grants for training in family medicine—$25, $35, and $40.

—Grants for graduate training programs for physicians and dentists—$7.5 (1973) $15 (1974).

—Grants for computer technology health care demonstration programs—$5, $10, and $15.

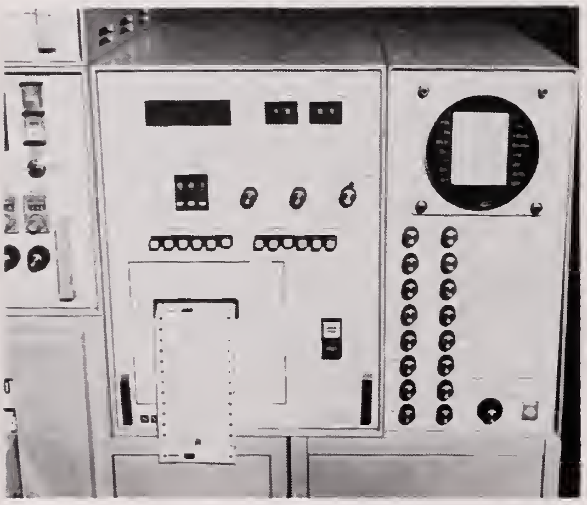
In addition to grants and interest subsidies, the bill authorizes the use of federal loan guarantees for the construction of teaching facilities.

Expansion in enrollment and shortening of training time in medical schools would be encouraged through capitation grants: $11,500 per student in four-year schools; and $13,500 per student in schools adopting a three-year curriculum. Additional payments would be made to schools which exceed prescribed levels of expansion. Support could also be provided to aid two-year schools of basic medical science to convert to four-year medical schools. Cancellation of loans for service in areas of need would be increased to 30% for each of the first two years and 25% for the third year.

It's New

Information contained in this section has been obtained from the manufacturers, whose literature should be consulted for complete details and information regarding indications and contraindications, dose, effects, administration, precautions, and side effects.

The Journal assumes no responsibility for drugs and other products listed here.



SMA data converter accepts data

The SMA Data Converter accepts data from a Technicon® SMA® (Sequential Multiple Analysis) biochemical analyzer (either an SMA 12/60 or an SMA 6/60 system) and reproduces them on a Digital Report Form simultaneously with production of the well known Serum Chemistry Graph profile. Information printed out on the form indicates immediately if a result is outside normal ranges (either "Hi" or "Lo" is printed next to each suspect result), and also shows day and month of test, (optionally) a six-digit Technicon IDee sample identification number, and a three-digit sequence number for counting samples in a day's workload. A bypass switch permits exclusion of selected channels from the printout. Teletypewriter and computer interfacing outputs are optional.

For additional information about the new SMA Data Converter, please contact Department R33, Technicon Instruments Corporation, Tarrytown, New York 10591.

"Custom design" feature of new analytical system

The "Flex" biochemical analyzer, developed by Technicon Instruments Corporation, will perform any six of the SMA 12/60 colorimetric determinations at a rate of 60 samples (360 tests) per hour.

The new six-channel system may be "custom" designed to serve the special needs of each institution: to provide a specific admission screen suited to the patient population of a given hospital; to profile a particular organ function (e.g., liver and heart or bone and kidney); to act as an enzyme assay system; to operate in tandem with an SMA 12/60 system (drawing from a common sampler) to provide an 18-test biochemical profile; or to automate the bulk of the chemistry workload in a smaller hospital or private laboratory. In any configuration, the SMA 6/60 "Flex" is well suited to stat procedures. From a cold start, the "Flex" can produce a six-test profile of a sample in just 15 minutes; if the system is already running, a stat profile is available in less than 10 minutes.

For additional information about the SMA 6/60 "Flex" system, please contact Department R38 Technicon Instruments Corporation, Tarrytown, New York 10591.

Balfor® disposable shoe covers

Balfor® disposable shoe covers are available in conductive or non-conductive Tyvek non-skid fabric, a non-woven fabric (not paper) which will not generate lint under normal use nor tear when wet.

The Balfor® disposable shoe covers meet standards established by U.L. for use in static hazard areas and are fire retardant. Elastic tops keep the covers snug while completely covering all shoe sizes.

Medicinews

ACS

Approximately 1,475 surgeons will be inducted as new Fellows (members) of the American College of Surgeons in cap-and-gown ceremonies during the annual five-day Clinical Congress of the world's largest organization of surgeons.

Fellowship, a degree entitling the recipient to the designation "F.A.C.S." following the doctor's name, is awarded to those surgeons who fulfill comprehensive requirements of acceptable medical education and advanced training as specialists in one of the branches of surgery, and who give evidence of good moral character and ethical practice.

Those receiving this distinction from your state at this 1971 Convocation are:

INITIATES 1971 — NEBRASKA

Hastings — George L. Osborne

Kearney — Kenneth W. Ellis, Joel T. Johnson

Lincoln — John L. Reed

Omaha — Anthony J. Carnazzo, Frank L. Eagle, Randolph M. Ferlic, Robert J. Klein, Richard H. Meissner, David V. Stephenson, Jr.

The American College of Surgeons is a voluntary scientific and educational association of surgeons, numbering 32,000 in approximately 100 countries. The College was founded in 1913 to improve care of the surgical patient, and has pioneered in many directions in making surgical care as excellent as it is today.

Coming Meetings

CRIPPLED CHILDREN'S CLINICS—

- Nov. 13 — Norfolk, Elks Lodge
- Nov. 20 — Grand Island, St. Francis Hospital
- Dec. 4 — North Platte, Elks Lodge
- Dec. 11 — Superior, Elks Lodge

ARIZONA HEART ASSOCIATION — Fifteenth Annual Cardiac Symposium, Mountain Shadows Resort Hotel, Phoenix, Arizona, January 21-22, 1972. Speakers on program include Eugene Braunwald, M.D.; Nina S. Braunwald, M.D.; Thomas N. James, M.D., and Andrew G. Wallace, M.D. For information write Arizona Heart Association, 1720 E. McDowell Road, Phoenix, Arizona 85006.

TRIOLOGICAL SOCIETY (The American Laryngological, Rhinological and Otological Society); Middle Section Meeting; Omaha, January 21, 22 and 23, 1972.

Registration fee: $50; this includes cocktail parties, lunches, and dinner. The address of the Middle Section is: 8601 West Dodge Road, Suite 234, Omaha, Nebraska 68114. Thomas Timothy Smith, M.D., is vice president of this section.

RURAL HEALTH — 25th National Conference. Sponsored by the AMA Council on Rural Health at the St. Francis Hotel, San Francisco, March 16-17, 1972.

NEBRASKA STATE MEDICAL ASSOCIATION — Annual Session, April 30 - May 3, 1972, Hotel Cornhusker, Lincoln, Nebraska.

NEBRASKA STATE MEDICAL ASSOCIATION — Annual Session, April 29 - May 2, 1973.

AMERICAN MEDICAL ASSOCIATION — Annual Session, June 18-22, 1972, San Francisco-Hilton Hotel, San Francisco, California.

Welcome New Members

Daniel B. Stone, M.D.
University of Nebraska Medical Center
Omaha, Nebraska 68105

John E. Olney, M.D.
4740 "F" Street
Lincoln, Nebraska 68510

JoAn F. Till, M.D.
140 South 27th Street
Lincoln, Nebraska 68510

Nebraska RMP

Q. Is there a reliable rabies pre-exposure prophylaxis regimen that provides protection to individuals with a high risk exposure?

A. Yes, the relatively low frequency of reactions to Duck Embryo Vaccine (DEV) has made it more practical to offer pre-exposure immunization to persons in high risk groups. Two 1.0 cc. injections of DEV are given subcutaneously in the deltoid area one month apart. This should be followed by a third dose six to seven months after the second dose. Although it is thought that this series of injections can be expected to produce neutralizing antibody in 80% to 90% of vaccines one month after the third dose this can be as low as 40% to 50%. Therefore, all individuals receiving pre-exposure vaccination should have a neutralizing antibody test 3 to 4 weeks after the last injection. These tests can be conducted through state health departments. If no antibody is detectable, booster doses should be given until a response is demonstrated. The duration of immunity is not known; individuals with continuing exposure should probably receive 1.0 cc. boosters every one to three years.

For a more rapid immunization, three 1.0 cc. injections of DEV may be given at weekly intervals, with a fourth dose three months later. Again, neutralizing antibody tests should be conducted.

If it is suspected the individual is allergic to eggs, a skin sensitivity test should be performed. If a positive allergy is shown, then nervous tissue vaccine (NTV) may be used. This vaccine is rarely used due to its higher frequency of nervous system reactions.

1. "Report of the Committee on Infectious Diseases, 1970." American Academy of Pediatric, Evanston, Illinois, 16th edition.

2. Center for Disease Control, U.S. Department of Health, Education and Welfare, Public Health Service, Atlanta, Georgia 30333.

REPORTS OF OFFICERS, DELEGATES AND COMMITTEES

(These reports appear as originally submitted. For the House of Delegates' deliberations, possible changes, and final action, refer to the minutes which follow these reports).

REPORT OF BOARD OF TRUSTEES

R. Russell Best, M.D., Omaha, Chairman; H. V. Nuss, M.D., Sutton; George B. Salter, M.D., Norfolk; Carl Frank, M.D., Scottsbluff; Russell L. Gorthey, M.D., Lincoln.

This report will concern itself with the Association's expenditures for the last quarter of 1970 and the first three quarters of 1971.

As previously reported to you, our 1970 budget amounted to $122,948.00. At the completion of our 1970 audit, it showed we expended $17,000.00 of our reserve funds to cover the cost of the Association's activities for 1970. This was the primary reason for the Board of Trustees asking for an increase of dues of $30.00 per member effective in January, 1972. This request was approved by the House of Delegates in April of 1971, and members dues will be $100.00 per year beginning January, 1972.

The budget for 1971 was set at $133,742.00, and we again anticipate the necessity to deficit spend although as of the date of this report we are still within the limits of our income for the year to date.

The Board in an effort to hold down costs of the Nebraska State Medical Journal, which for several years has necessitated financial support from the Association's funds over and above the amount of the members dues apportioned to the Journal, has directed that the Journal be limited to an average number of pages per issue. In line with this, the Editor was asked to reduce the editorial section of the Journal to a given number of pages each issue. We are pleased to report that the cooperation of the Editor and the headquarters staff in this economy program for the Journal is resulting in decreasing printing costs for this publication. While it is evident that the Journal will not be able to support itself with the income from advertising and dues share, it would seem certain that the Association will not have to subsidize costs to the extent we have in past years. The Board will continue to keep close surveillance on this activity.

Our Association has been in its new quarters for a little more than a year and all reports that the Board has received indicate that it is functioning well and that all committee meetings are being held in the conference room of the office to the mutual advantage of all concerned.

At the August meeting of the Board, considerable discussion was given to the costs of the 1971 Annual Session in Omaha. The financial expenditures exceeded our income by $4,096.87. By comparison, our 1970 Annual Session netted $248.00. It is the feeling of the Board that alternate sites for the 1973 meeting in Omaha should be explored and has directed the headquarters staff to visit several locations and report to the Board at the Fall Meeting.

The Board also wishes to report that the Association's non-profit status has been reviewed this past year by the Internal Revenue Service. We have received word that this continued status was approved by the IRS; however, we are currently appealing a ruling which that agency has made concerning income derived from Journal advertising. The IRS contends that certain income from advertising in the Journal should be considered unrelated income and therefore subject to taxation. We have, through our accounting consultants, appealed this proposed ruling. It appears that it will be late December before a final decision is reached. The Board is watching this matter with the utmost interest and concern for a decision in favor of the IRS would add considerable costs to the Journal in the form of taxation. We will keep the membership informed on this issue.

RELATIVE VALUE STUDY REVISION

At the Annual Session, the House of Delegates approved a study to determine whether or not the 1965 Relative Value Study should be revised. If the House should approve such a revision, the estimated cost for this new publication will be approximately $7,500 to $10,000. It is the recommendation of the Board of Trustees that the Association should attempt to recover part of this expenditure by charging at least $3.00 per copy for any new revision published.

INVESTMENTS

As of August 31, 1971, our investments in U.S. treasury notes, municipal and corporate bonds, and common stocks amount to $95,324.68. With the advice of our investment counsellors, we have actively worked our portfolio and have realized an increase in our total investments this past year. In addition, the Association has a Contingency Fund used for its role as fiscal agent for the Nebraska Regional Medical Program. The September 15th balance of this account amounts to $50,205.44, consisting of cash and certificates of deposit. Your Board continues to keep informed about the program and its expenditures as they relate to the Association.

STAFF

At the Annual Session, the House approved a program of Peer Review and assigned administrative work to the headquarters staff. The report indicated that additional staff and funds would be needed to carry out this program for the Association. This item was not available to the Board at the time it was considering a dues increase. As of this date, the Executive Secretary informs the Board that no additional personnel have been hired. The State Peer Review Committee has been formed, and the state has been divided into five peer review districts who are currently in the process of naming members to district committees. Once these details have been completed, the state-wide peer review program will be ready for implementation. Initially the headquarters staff plans to absorb these additional duties until at such time the work load becomes too great. The Board will report to the House at the 1972 Annual Session regarding additional staff and costs attached to this program.

This completes the report of the Board of Trustees. We hope that our responsibilities are being carried out in accordance with the wishes of the Association, and we welcome comments from the membership at any time.

Respectfully submitted,
R. RUSSELL BEST, M.D.,
Chairman.

REPORT OF EDITOR, NEBRASKA STATE MEDICAL JOURNAL

Volume 55 of the Nebraska State Medical Journal was published in 1970. It contains 37 editorials; and 90 articles written by 131 authors. The numbers of articles and authors represented in 1968 were 70 and 96; in 1969, 102 and 154.

The format of the Journal has been changed slightly, and the number of pages reduced. Informative sections, including "Medicinews," WashingtoNotes," and "Down Memory Lane," have been retained, so that traditional features of the Journal, together with our original articles and editorials, continue to appear as before.

Original articles dealing with the following subjects were published in the Journal in 1970:

- New abortion laws
- Blue Shield and Blue Cross
- Nurses training
- Cardiac surgery
- Health care facilities
- Spectator's heart
- Drug abuse
- Health care in the future
- Medicare
- CV roentgenology
- Genetic counseling
- Breast cancer
- Potassium therapy
- Immunization
- Suicide in Nebraska
- Emergency health service
- Gastroscopy
- Rural health care
- Maternal mortality
- Peer review
- Residential services
- Cancer delay
- Cancer therapy
- Medicine and religion

The pages of the Journal are, as always, open to the Woman's Auxiliary, and an article by the President of the Nebraska State Medical Association is always included.

It was a good year.

Respectfully submitted,
FRANK COLE, M.D.,
Editor.

REPORT OF THE EXECUTIVE SECRETARY

It may sound repetitive to say that the Association has again experienced the busiest year in its history. However, if one uses as a barometer, the activities of the Association in the past year, this is what has happened. Since October of 1970, Association officers and/or staff have attended a total of 162 meetings. Of these, eighty-two were committee meetings; twenty-four miscellaneous meetings with allied professions, state agencies, etc.; ten national meetings; thirty-one legislative hearings; and fifteen luncheon meetings. Every attempt is made to attend all meetings in which the Association has an interest. Therefore, policies and views of organized medicine are made known to a wide variety of organizations and individuals.

STATE LEGISLATION

With the advent of yearly legislative sessions in Nebraska, the Association will have to be consistently aware of and establish positions on a variety of health issues that will be introduced. During the 1971 Session, 1003 bills were considered. At the 1972 Session, each Senator will be limited to ten bills for a total of 490, plus 128 bills left over from the 1971 Session; for a total of 618 to be considered at the forthcoming sixty-day Session. In the 1969 Biennial Session, 1400 bills were considered compared to 1621 which will have been considered in the 1971-1972 Sessions. There is still no better substitute than contacting your State Senator at the local level. We appreciate your assistance in the past and hope you will continue to be active in contacting your State Senator as the need arises.

TAPING OF HOUSE SESSIONS

In April, 1964, the House of Delegates directed that all Sessions be taped for purposes of referral at a later date if necessary. Our records indicate that we have referred to no Sessions over three years old. In view of this, I would like to suggest the House reconsider this ruling and allow tapes to be erased and reused after five years.

NEBRASKA MEDICAL FOUNDATION

This is a brief follow-up of the Annual Report made in April regarding the Foundation's Loan Program. A total of seventeen loans amounting to $21,150 have been made since April. This represents a total of 991 loans amounting to $1,077,230 since the program began in March, 1964.

Contributions since April are physicians, $3,452.50; Auxiliary, $944.76; and others, $847.74, for a total of $5,245.01.

We wish to extend thanks and appreciation to all those who have contributed to the Foundation. Without this support the loan program would not be possible.

STAFF

We have a staff change in the office. Pam Shepherd has replaced Judy Picard who moved to Texas.

MEMBERSHIP

Below are the membership statistics for 1970 and 1971:

1970

Active	1,218
Life	117
Service	2
TOTAL	1,337
Less Deceased	9
TOTAL	1,328
A.M.A. Members	1,204
Potential Members	18
New	46
Reinstated	6
TOTAL new doctors moved into state, 1970	70

1971

Active	1,221
Life	116
Service	2
TOTAL	1,339
Less Deceased	11
TOTAL	1,328

A.M.A. Members	1,211
Potential Members	18
New	55
Reinstated	6
TOTAL new doctors moved into state, 1971	79

Respectfully submitted,
KENNETH E. NEFF,
Executive Secretary.

REPORT OF NORTH CENTRAL MEDICAL CONFERENCE

St. Paul, Minnesota — November 1, 1970

The North Central Medical Conference is composed of members of the Medical societies of the states of Iowa, North and South Dakota, Minnesota and Wisconsin. This organization has been meeting annually for over twenty years, each Fall, and has a breakfast caucus at each session of the House of Delegates of the A.M.A. The objectives of this Conference are the discussions and exchange of thoughts affecting our respective State Medical Soceties and their membership; to evaluate, explain and support resolutions of merit presented to the House of Delegates of the A.M.A. The conference is a well respected loose-knit organization which exists solely for the benefit of its membership in the enhancement of the quality of medical care.

This annual conference is surprisingly well attended each year and the Nebraska delegation was ably represented by its officers. The meeting opened on a note of sadness by the recognition of a resolution in the memory of Dr. Paul J. Maxwell who was President-elect of the Conference at his untimely death, September 4, 1970. He had also been Nebraska's delegate to this Conference since 1960.

The topics of discussion included an excellent summary of problems facing the A.M.A. as visualized. by Dr. Bert Howard, Executive Vice President of the A.M.A. He ably reviewed the financial stress being placed on the A.M.A. budget by income tax on unrelated income by IRS, drop in A.M.A. membership due to removal of compulsory membership by a number of states as a requirement for membership in the state society, and ever present inflation. He described the effective effort in dealing with the malpractice insurance problem and predicted a partial solution to the problem by cooperative efforts between the A.M.A., insurance carriers and State Medical Association. (The recent progress reported by our own State Medical Society and a carrier is an example of this effort). Dr. Howard related that the challenges facing medicine the next few years include:

1. Reducing a greater percentage of institutional to non-institutional medical care.
2. Distinguished between ill and worried-wells and handling the latter in an appropriate manner.
3. Preserve the fee for service approach, which can best be done through a pleuralistic system.
4. Expedite the medical training system.
5. Identify the real deficiencies in medical care and initiate programs to alleviate the deficiencies.

The program included discussions in depth on the pros and cons of Foundations for Medical Care. The California foundations were described. The Hennepin County Foundation of Minnesota was discussed as to its development, objectives and financing. At the time of this report it was not in full operation. The Iowa Medical Society through action of their officers and House of Delegates have supported the foundation concept and are in the process of further study, plus an education program for their membership. As of November, 1970, over thirty Foundations for Medical Care had been established in the United States, the majority being located in the State of California. Where foundations have been established they have taken over the duties of "Peer Review." The difficulty of setting up a Foundation was apparent from the presentation by the Minnesota group. They had spent over seventeen months trying to put together a cooperative plan that would bring together the insurance industry and physicians.

Considerable attention was devoted to the Malpractice Insurance crisis. One speaker, the Executive Vice President of the American Arbitration Association related the virtues of arbitration versus litigation. He pointed out that arbitration tends to protect the involved physicians from the glare of bad publicity. It was emphasized that arbitration was simpler and quicker. It relieves the physician of anxiety and embarrassment of public issues. The other speaker, a trial attorney, presented another viewpoint. He stated claims settlement by arbitration were generally higher than by litigation. He contended no system of judgment about malpractice has been designed up to now which is superior to the court system.

The executive claims attorney for the St. Paul Insurance Companies described in considerable detail their experience in the 48 states in which their company writes malpractice insurance. He stated that in nine states, the company has a medical association plan. Of the eight states with the lowest rates, six have plans with the St. Paul Insurance Companies.

In conclusion, I wish to report that I was appointed to serve as delegate to the North Central Medical Conference due to the untimely death of Dr. Paul Maxwell. It was obvious that Dr. Maxwell was held in high regard by his colleagues of this Conference, having been elected President of the Conference to begin his duties in December, 1970. As has been suggested in past reports of this Conference to the Nebraska State Medical Association, I would like to urge larger attendance from our membership to these annual meetings. The next meeting will be in St. Paul, Minnesota, October 30th and 31st. An excellent program has been arranged.

Respectfully submitted,
R. F. SIEVERS, M.D.,
Delegate.

REPORT OF EMERGENCY MEDICAL SERVICE COMMITTEE

Kenneth Kimball, M.D., Kearney, Chairman; Lynn W. Thompson, M.D., Blair; Keith Shuey, M.D., Tecumseh; Harris B. Graves, M.D., Waterloo; Loren E. Imes, M.D., Grand Island; Donald F. Prince, M.D., Minden; Floyd Shiffermiller, M.D., Ainsworth; John J. Ruffing, M.D., Hemingford; P. B. Olsson, M.D., Lexington; Keay Hachiya, M.D., Lincoln; Richard B. Svehla, M.D., Omaha.

The Emergency Medical Service Committee has not met frequently during this past year. However, the activities which they have considered and worked on have been finally implemented and several are worthy of report to the House of Delegates.

The State Health Department through the efforts of Dr. Smith and Mr. Parker has been successful in obtaining funding through the National Highway Safety Program for development of training courses of instructors who will be available to any community in the state to help develop and present training courses for Emergency Medical Technician-Ambulance. Any community wishing to upgrade the level of care of their ambulance attendants should contact Mr. Parker in the State Health Department regarding scheduling of these instructors.

The initial written examination for certification of Emergency Medical Technicians-Ambulance on a national basis is scheduled to be held in Nebraska on the 29th and 30th of October. There are some 25 ambulance personnel who are availing themselves of this opportunity for certification at that time and it is hoped that this will improve in number as communities update their ambulance services.

Signs on the Interstate highway system to designate exits which go to recognized hospitals providing care for emergencies on a 24-hour basis has finally been approved and should be augmented in the next few months. The State Health Department has met with the State Highway Department and the design of the signs, their method of location and the information conveyed on them has been agreed upon.

The members of the Committee have been developing key resource people in each major community of their area, and these names are being assembled for use as key individuals at each area for the collection and dissemination of emergency medical information. If any of the Delegates have names to propose or suggestions for personnel to represent their areas, we would be happy to have these forwarded to Mr. Neff and then distributed to the Committee.

Respectfully submitted,
KENNETH KIMBALL, M.D.,
Chairman.

REPORT OF COMMITTEE ON GERIATRICS

Vernon G. Ward, M.D., Omaha, Chairman; Robert G. Osborne, M.D., Lincoln; Richard Booth, M.D., Omaha; D. W. Kingsley, Jr., M.D., Hastings; Dwight Frost, M.D., Omaha; F. Paustian, M.D., Omaha.

The resolution presented to the committee in April, 1971, from the Advisory Council on Hospital and Medical Facilities of the State Department of Health has been transferred out of the province of the Committee on Geriatrics.

No business has been presented to this Committee since the report of April, 1971.

Respectfully submitted,
VERNON G. WARD, M.D.,
Chairman.

REPORT OF HEALTH EDUCATION IN SCHOOLS AND COLLEGES COMMITTEE

S. I. Fuenning, M.D., Lincoln, Chairman; Paul Bancroft, M.D., Lincoln; George L. Osborne, M.D., Lincoln; Paul Plessman, M.D., Seward; H. V. Smith, M.D., Kearney; Dean McGee, M.D., Lexington; Warren Bosley, M.D., Grand Island; R. C. Weldon, M.D., Nebraska City; Mrs. John C. Filkins, Omaha; Mrs. Leland Olson, Omaha; Mrs. Dean McGee, Lexington; Mrs. Robert Jones, Omaha.

This report is a brief summary of the activities of the Health Education Committee during the period of October, 1970, to September 30, 1971.

The Health Education Committee has concentrated on the implementation of the resolutions on health education passed by the House of Delegates in October of 1970. The following organizations have been contacted in order to secure their cooperation for the implementation of the resolutions:

Nebraska State Education Association
Nebraska School Boards Association
Nebraska State School Administrators Association
Nebraska Council on Higher Education
Nebraska Boards of Higher Education
Nebraska State Department of Education
Nebraska State Department of Health

The Public Law LB51 was passed by the Nebraska State Legislature in 1971. The purpose for this law was to promote comprehensive health education in our schools, "including instruction in physiological, psychological, and sociological aspects of drug use, misuse, and abuse". Following this report is a copy of the public law. The Health Education Committee has given its full support for the implementation of this statute.

The Subcommittee on Health Education Curriculum is in the process of studying the health education curriculum of other states. It is the intent of this Committee to work cooperatively with those councils and organizations that have a vested interest in the establishment of health education curriculum.

Educational Television has been effective for the promotion of health education and is very much needed. The following resolution was adopted by the Committee:

> "WHEREBY the Nebraska State Medical Association Committee on Health Education in Schools and Colleges has recognized and appreciated the cooperation for presenting programs relating to health to the State of Nebraska through the Nebraska Educational Television Network; the Committee thereby recommends and supports further State of Nebraska funding for educational television services in order that all communities and schools can derive the benefits of this service."

An important organization unit in the field of elementary-secondary education in the State of Nebraska are the educational service units. These do provide specialized assistance to school systems within their designated area of concern. It is the intent of the Health Education Committee to work closely with them in the promotion of health education. The following procedure was approved:

1. A letter to be sent from the President of the Nebraska State Medical Association, including a copy of the health education resolution, to the chairmen of each of the seventeen educational service units in the State of Nebraska urging the consideration for the employment of the health education consultant in order to promote the development of health education programs in the schools within their district.
2. A physician or auxiliary member in the respective educational service unit area to fol-

low through after the letter has been sent to provide further support for the employment of a health education consultant.

Dr. LeRoy Smith of Kearney has accepted the chairmanship of the Inter-Agency Committee on Drug Education. The Health Education Committee will support the work of this committee in the promotion of drug education.

Continued active support has been provided by the Health Education Committee to the Nebraska Inter-Agency Health Council and its activities which are concerned with the promotion of health. The following is a list of their committees:

Committee on Drug Education
Committee on Continuing Education
Committee on Smoking and Health
Committee on Health Careers
Committee on Fitness

The Fourth Nebraska Conference on Education for Health and Fitness will be held immediately following the close of the 1972 meeting of the Nebraska State Medical Association, Wednesday evening, May 3. This Fourth Nebraska Conference will be held jointly with the Midwest Regional Conference on Fitness sponsored by the President's Council on Physical Fitness.

The Chairman expresses great appreciation to all members of the Nebraska State Medical Association that have provided continued support of health education in their local area. In addition, I want to express my appreciation to the members of the committee for their work during the year in the promotion of health and fitness in the State of Nebraska.

Respectfully submitted,
S. I. FUENNING, M.D.,
Chairman.

The following amendment to the statutes of Nebraska will be of interest to you:

LB-51 — Passed by the Nebraska State Legislature, 1971—

Section 1. Provisions shall be made by the proper local school authorities for instructing the pupils in all schools in a **comprehensive health education** program which shall include instruction as to the physiological, psychological, and sociological aspects of drug use, misuse, and abuse. Drugs are defined as "any and all biologically active substances used in the treatment of illnesses, or for recreation or pleasure." Special emphasis shall be placed upon the commonly abused drugs of: tobacco, alcohol, marijuana, hallucinogenics, amphetamines, barbiturates, and narcotics.

Section 2. It shall be the duty of the Commissioner of Education to prepare such teaching aids and materials as would be necessary for an effective course in **comprehensive health education** which would include drug education for distribution to all public and private schools approved for continued legal operation under rules and regulations established by the State Board of Education pursuant to subdivision (c), subsection (5) of section 79-328, requesting such materials.

Section 3. School systems failing to meet the provisions of this bill shall be guilty of a deviation of the rules and regulations for the approval and accreditation of schools, and proper action by the State Department of Education shall be enforced.

REPORT OF INSURANCE AND PREPAYMENT MEDICAL CARE COMMITTEE

James Dunlap, M.D., Norfolk, Chairman; Stanley Truhlsen, M.D., Omaha; Paul Scott, M.D., Auburn; Clyde Kleager, M.D., Hastings; A. L. Smith, Jr., M.D., Lincoln; T. J. Lemke, Jr., M.D., Columbus; James Ramsay, M.D., Atkinson; Orvis Neely, M.D., Lincoln; Hiram Walker, M.D., Kearney.

The Insurance and Prepayment Medical Care Committee, now working as a hybrid committee combining the previous Insurance Committee and previous Prepayment Medical Care Committee, has met on two occasions during the past year. In addition, we have had occasion to monitor several meetings of the Board of Directors of the Nebraska Medical Service (Blue Shield). This committee has, during the past year, confined its efforts to three fields of endeavor and this report shall cover these areas separately.

(1) In accordance with the Constitution and By-Laws of the Nebraska State Medical Association, the committee has made itself cognizant of the reciprocal problems of members of our State Association and of the Nebraska Medical Service. Numerous problems of facts and of philosophy have arisen between Blue Shield and Nebraska physicians but through various meetings, these problems have been and are being resolved. It is not the feeling of our committee that such problems have been of a major nature, but it is the feeling that, without the opportunity for liaison between the medical profession and the Nebraska Medical Service, such problems could become proportionately larger.

Our committee has taken cognizance of the newly formed Physician Advisory Committee to Blue Shield and believes this committee will serve a very useful function, not only in problem cases, but in educational guidance.

The committee has also taken cognizance of many major problems facing the insurance field. Of particular importance are the areas of increasing cost, increasing utilization, and increasing third-party (government, consumer, labor, management, and peer review) intervention. We approve of the relationship of the Nebraska State Medical Association and Blue Shield and continue to support concept of this relationship as carried and specified in the Constitution and By-Laws of our State Association.

(2) Malpractice insurance underwriting in Nebraska, as nationally, has been sharply curtailed during the last several years for many obvious and well publicized reasons. During the last several months, however, increasing insurance company interest has been demonstrated in this field because of more favorable premium loss ratios. This does not come about as a result of decreased malpractice litigation, but rather because of increasing premium rates to physicians, hospitals, etc. During the last few weeks you have received a communication from your Insurance Committee, outlining a madpractice offering by the St. Paul Insurance Companies for the individual members of the Nebraska Medical Association. It must be emphasized that this offering is for a group program in contradistinction to a group policy. The St. Paul Company and members of your Insurance Committee feel that there are multiple advantages to individual policies under a group program and are pleased to report this offering to you.

The current Insurance Prepayment Medical Care Committee had little to do with this malpractice insurance offer since all of the original groundwork had been done by the previous Insurance Committee. We feel that special commendation should be given to Doctor Roger Mason and to previous committee members for the large amount of time and effort devoted to securing malpractice coverage of this type for Nebraska physicians.

(3) The Health Maintenance Organization (HMO) concept of delivery of health care has received considerable attention in the past few years. This concept has engendered increasing consumer, labor, and management attention as well as marked attention in the political field for numerous economic and other reasons. Basically a Health Maintenance Organization may be defined as an organized system of comprehensive health care based upon voluntary enrollment in a geographic area, financed thorough prepayment pre-negotiated means, on a capitation basis for a fixed period of time.

Because of increased publicity in this field and mindful of the increasing costs of the delivery of medical care and impending national legislation which will give increasingly strong impetus to the development of health maintenance organizations of various form, your committee has held two meetings of a self-educational nature concerning this subject.

The committee has developed a substantial amount of background information of a historic nature concerning this subject and, in addition, has met with representatives of Mutual of Omaha and Nebraska Blue Cross - Blue Shield to become attuned to current developments as affecting Nebraska physicians.

Despite multiple claims of more economic delivery of quality medical care, your committee feels that at the present time the AMA's position as quoted below most clearly sets forth our feelings.

> "We support a pluralistic approach to the delivery of medical services . . . However, before any HMO program is initiated nationwide through legislation and held out as a realistic benefit available to all Medicare beneficiaries, we believe that cost and utilization data should first be developed with controlled demonstrations testing the capability of such a program to accomplish its purpose. There are questions regarding in-fact cost savings, as well as the quality of health care which may be provided when there are economic incentives to providers to reduce utilization. We would wish to assure that Medicare patients uniformly receive the best quality care. We recommend that organizations delivering health care should be under the control and guidance of medical personnel."

Your Committee has no definite immediate plans for pursuance of this subject matter, but does plan continuing watchfulness over the development of the HMO concept and will endeavor to keep Nebraska physicians and the House of Delegates cognizant of developments which we feel are of importance to the publics' and professions' benefit or detriment.

Respectfully submitted,
J. H. DUNLAP, M.D.,
Chairman.

REPORT OF MEDICAL EDUCATION COMMITTEE

James Ramsay, M.D., Atkinson, Chairman; James Bridges, M.D., Fremont; R. C. Rosenlof, M.D., Kearney; W. W. Waddell, M.D., Beatrice; Wendell Fairbanks, M.D., Auburn; Robert Stein, M.D., Lincoln; Joseph Holthaus, M.D., Omaha; Robert Kugel, M.D., Omaha; James Long, M.D., Alma; Louis W. Burgher, M.D., Omaha; Leland Lamberty, M.D., Lincoln.

Medicine today is a dynamic, rapid changing field of endeavor. It is, therefore, vitally important to recognize that medical education, likewise, must have a dynamic and rapid changing concept.

Only a few years ago medical knowledge was based on observation of how a person's body acted when he had a certain disease reinforced by what changes could be seen in the microscope when body tissues and fluids were examined. Bacteriology supplied additional evidence of a predominant type of bacteria and x-rays would show patterns which experience taught us were usually associated with certain diseases. Thus, medical education consisted largely of learning what we called disease entities and treatment of these entities by methods which had been found to be helpful over a period of twenty years by trial and error.

Now all of this is changed and is changing. The world of investigative medicine has taught us more about how the body functions in the past ten years than has been learned in the whole history of man. The advent of antibiotics and the use of sensitivity testing has made it possible to match specific treatment to specific bacterial infections. The use of the electronic microscope and radioisotopes has made all previous knowledge of human physiology obsolete in the past five years and each year the new knowledge assembled about man and his environment makes impossible the task of teaching each medical student all there is to know about medicine.

Medical school faculties are currently wrestling with the problem of what body of knowledge must every physician know to deal effectively with the multiple infirmities of the human body. Every medical school in the U.S. is frantically changing its curriculum and methods of teaching in attempts to keep up with the ever increasing amount of medical facts being discovered. Whereas a few years ago the student was taught a few drugs which were effective for a few diseases he must now be taught precisely how each new drug affects each organ of the body and how he or she can predict the results each drug will produce.

The medical student must be made familiar with electronics to understand the new achievements available with computerized systems and the newer more sophisticated diagnostic tools of diagnosis and treatment. Above all, the student must learn where to obtain the help he will need for the accurate knowledge he must have to deal with the diseases of the human body.

As if this were not enough, the new medical student is faced with assimilating the terribly complex field of behavioral sciences which medicine has recently discovered to be so important to the health of the individual. The importance of nutritional deficiencies unheard of a few years ago is a necessary knowledge as is the giant newcomer called genetics.

Recognizing that there is each year so much more to learn and with less time in which to learn it all because of the shortening of the number of years in medical school we feel that these facts must be faced.

(1) Medical school curriculum must be flexible to adapt to the many changes in knowledge. Instructors will need to be innovative and even more knowledgeable than ever before. But teaching ability will become the most sought-after asset of faculty members in contrast to research and writing skills.

(2) Medical education is a continuous life-long experience. The medical school graduate will soon need three years postgraduate training to achieve licensure, although this is not the case currently because of the statutory provision. Additional education beyond medical school will be essential to learn how to use the facts learned in the care of human disorders. A preceptor type of graduate medical education must be used to teach additional information, skills of application and the art of relating to the patient.

(3). Every physician must of necessity carry out some form of continuing education program to keep abreast of the progress of medical knowledge and how to adapt this knowledge to the patient.

(4) Some form of determination of knowledge must be accomplished on a regular basis as a means of self evaluation by the physician for the benefit of the patient.

This committee, therefore, makes the following recommendations.

(1) The medical schools prepare their curriculum to incorporate opportunities for innovation in teaching, keeping in mind the necessity for balance between education, service and research since all three are essential to medical education.

(2) The medical schools should cooperatively prepare multiple forms of postgraduate courses so as to be able to reach the solo rural practitioner as well as the physician practicing in a large group. Suggested methods were by refresher courses, telephone conferences, regional workshops, movie of the month, article of the month, tape recordings, and utilization of residents to free practitioners to attend postgraduate training. The cost of the multiphasic program should be borne by the physician who receives the training. All courses must of necessity meet requirements of specialty groups for recertification.

(3) The State Licensure Law should be changed to require that beginning in 1973 every Nebraska physician must complete at least 150 hours of postgraduate training every three years for renewal of his or her license. Thus, in 1976 every physician will have to report 150 hours of training obtained since 1972 in order to renew his license. This training should be certified by the Nebraska Chapter of each specialty group (including AAGP) which shall be responsible for establishing the courses local, state, national or international which can be used by their members for recertification. Those who belong to no specialty group can be certified by earning the AMA's participating physicians award, The Physicians Recognition Award.

(4) All Nebraska physicians become familiar with the mechanisms for medical audit and proceed to implement audits in their own practices and in their local hospitals in order to keep current in both fields. It is anticipated that medical audit participation would be a valuable form for postgraduate training and should be considered by every specialty group as an acceptable way of gaining hours for recertification. Peer review will inevitably lead to such audits and this committee feels that voluntary choice of methods by local physicians will be much better than methods imposed by government control. An important side benefit will be the controlling of malpractice insurance rates through the new proposed group policy for members of the NSMA.

(5). As added incentives for postgraduate training your committee recommends:

(a) Each physician when recertified shall receive a certificate suitable for framing to be placed in his office;

(b) Lists of members of "Over Two Hundred Club" and "Over Two Hundred Fifty Club" be distributed and members recognized at the Annual Awards Banquet;

(c) The local news media be informed when physicians are recertified to keep the public informed of the necessity for their physician to be gone from his community at times for postgraduate training;

(d) Lists of physicians meeting the recertification requirement be published in the State Medical Journal.

Respectfully submitted,
JAMES RAMSAY, M.D.
Chairman.

This addendum refers to a portion of legislation passed by the State of New Mexico.

SENATE BILL 71

Approved March 24, 1971

Section E. For the purpose of protecting the health and wellbeing of the citizens of this state and maintaining and continuing informed professional knowledge and awareness, the Board may establish mandatory continuing education requirements for physicians licensed in this state. In establishing such requirements, the Board shall recognize and give weight to existing educational methods, procedures, devices to existing educational methods, procedures, devices and programs in use among the various medical specialties and other recognized medical groups and the concensus of the members of the medical community. This subsection does not abrogate or affect the status, force or operation of the Uniform Licensing Act. The Board shall not establish and enforce such requirements if they will reduce the availability of physicians in a community to an extent that adequate medical care is jeopardized.

REPORT OF MEDICINE AND RELIGION COMMITTEE

W. Ray Hill, M.D., Lincoln, Chairman; George Harris, M.D., Cambridge; T. C. Kiekhaefer, M.D., Superior; Merle Sjogren, M.D., Omaha; J. J. Hanigan, M.D., Lincoln; E. J. Hinrichs, M.D., Wahoo; Mrs. Keay Hachiya, Lincoln; H. H. Whitlock, M.D., Lincoln; Donald F. Prince, M.D., Minden; Kenneth C. Bagby, M.D., Blair.

As Chairman of this committee I attended the regional meetings of the AMA Committee on Medicine and Religion in Chicago in February of this year. This included representatives from North and South Dakota, Nebraska, Kansas, Oklahoma, Arkansas, Iowa, Minnesota, Illinois and Michigan. There is a great deal of variation in the activity of the state committees throughout this area and I believe that our state is perhaps average or a little below average in our activity that we have in this field. I would like to thank you as representative of the State Society for furnishing the transportation to and from Chicago.

The committee sponsored a meeting at Atkinson, Nebraska in December at which were representatives of medicine and religion. The topic discussed was death and dying and the problems associated with it.

Other meetings in the state were promoted but not developed and it is thought that there is much interest in the problems where the philosophies of medicine and religion cross by the clergy but the interest in medicine is not sufficient to congeal activity throughout the state.

Perhaps our outstanding activity for the year was a project sponsored by our committee and implemented by Doctor Merle Sjogren of Omaha. This was an educational program carried on at Grace Bible Institute in Omaha and he had the help of many Omaha doctors. Topics discussed at this meeting covered the topics of death and dying with suicide, abortion, the pill and the ways that the clergy may be helpful to the healing profession in the hospital or home in the presence of illness. The committee and the State Society is indebted to Doctor Sjogren and his assistants for this program. It is interesting to note that there are a few similar programs carried on in seminaries and bible institutes throughout the United States.

A Prayer Breakfast for the House of Delegates is planned for the October meeting of 1971.

Respectfully submitted,
W. RAY HILL, M.D.,
Chairman.

REPORT OF MENTAL HEALTH AND MENTAL RETARDATION COMMITTEE

J. Whitney Kelley, M.D., Omaha, Chairman; C. H. Farrell, M.D., Omaha; James Dunlap, M.D., Omaha; Robert Osborne, M.D., Lincoln; John Baldwin, M.D., Lincoln; Henry G. Waters, M.D., Omaha; C. T. Frerichs, M.D., Beatrice; Byron B. Oberst, M.D., Omaha; Harry Henderson, M.D., Omaha.

The Mental Health Committee has met twice in official session since the Annual Session. In order to discuss comprehensively these meetings, it might be well to mention that preceding the convention, the committee of the last year had started meeting with Warden Seigler in efforts to lend the prestige of the Medical Association to possible changes which could improve the situation at the penitentiary. These sessions were not intended in any way to be critical but to be helpful and Warden Seigler signified his great pleasure in the meetings. This was the first time that such an attempt had ever been made voluntarily by a group of doctors to his knowledge.

On June 2nd, we had a meeting at the penitentiary itself and, indeed, the committee not only had a tour of the institution, in general, but ate with the inmates in their own dining room and found the food to be palatable, nourishing and acceptable. In these discussions a number of things were brought out and Doctor Osborne and the Warden were asked to write a position paper which would, in some way, indicate what efforts could be made by our committee to improve the situation at the penitentiary.

Doctor Osborne and Warden Seigler did write such a position paper but had not had time to have an opportunity to present it. There were many concrete suggestions which were made in it for the improvement of health care in the institution itself. The change of administration has produced a new warden and, as yet, we have not contacted the new one because of the multiple duties in adjusting to his new job.

On July 12, the meeting which had originally been intended to be a meeting with Warden Seigler was changed in agenda so that the matters which were concerning welfare were to be discussed at great length.

Welfare is confronted with the fact that the outgo of the funds was occurring at a rate more rapidly than they had anticipated and there is a likelihood that at the present rate of expenditure that Welfare will run out of funds along before the end of the year. Department personnel have always been extremely cooperative and helpful with the Medical profession, and looking for a way to correct this.

The suggested changes in the relative value, which were made to the private sector by the Department of Welfare, did not prove satisfactory to the physicians in charge, and the staff understood some of the reasons that the new relative value scale, as suggested, were unrealistic.

It is well to note that we have not had official contact with the Department of Welfare since then, but Welfare has taken some rather drastic steps in reversing the, many times stated noble steps, of taking patients out of State Hospitals and putting them in local areas. In keeping with the policies of the states around us, Nebraska Welfare has decided to cut back materially on the private care of psychiatric patients. The general average of working days that would be permitted is fourteen days and, with special permission on application, it would be possible for a maximum of thirty days of acute medical care to be given. They would then have to go to State Hospitals.

It seems a shame that the trend should revert back to what they were many years ago, but economic needs certainly are the explanation. The hospital system is given the job of taking care of the patients following the termination of the limits as set by the Department of Welfare. The fact that psychiatry alone was chosen in the change of policy is interesting and perhaps more developments will come later.

Your chairman went to Chicago for the Mental Health meeting for all State Association committee chairmen with key representative men from the American Psychiatric as well. This meeting was very interesting in that the rather comprehensive study of insurance and utilization of mentally ill patients was made and presented and reaffirmation of the need for having care of mental patients closer in approximation to their homes was announced. This will emphasize the need for private care and possibly some of the facts gained in this meeting will have some real importance. This probably will influence the thinking in clinic mental health care, in the projected new national health insurance plan.

Respectfully submitted,
J. WHITNEY KELLEY, M.D.
Chairman.

REPORT OF RELATIVE VALUE STUDY COMMITTEE

B. R. Bancroft, M.D., Kearney, Chairman; Donald Purvis, M.D., Lincoln; C. N. Sorensen, M.D., Scottsbluff; John D. Coe, M.D., Omaha; Orin R. Hayes, M.D., Lincoln; Lyle Nelson, M.D., Crete.

The Relative Value Study Committee met June 16, 1971 at the N.S.M.A. Headquarters Office, Lincoln, Nebraska, to consider possible revision and updating of the Relative Value Study as directed by the House of Delegates in April, 1971. The House of Delegates had already adopted the A.M.A. Document "Current Procedural Terminology" (CPT) in October of 1970.

It was recognized that the 1965 N.S.M.A. Relative Value Study used the four-digits system approach and that many new procedures have been developed which are not included in our latest study which renders our latest RVS largely absolete.

Because of the great amount of work and expense involved in developing a current RVS, it was felt that some effort should be made to determine its value to the members of the N.S.M.A. consequently, they were polled asking if they used it and if thsy favored revision. There were only 169 responses, but these were overwhelmingly in favor of revision.

The question now is whether an overwhelming response in favor of revision from less than 15% of the membership of the N.S.M.A. should be considered a mandate demanding revision. Consequently, your Committee feels that this decision should be made by the House of Delegates.

The House of Delegates direction that the Relative Value Study Committee establish relative values for pre and post-operative care was considered by the Committee. The Committee felt that there was no reason why the referring physician could not bill the patient for a pre-operative work-up. They felt that when surgery on follow-up care was provided by different physicians the situation could be taken care of as it is in the California RVS. The value of the surgery and post-operative care may be apportioned between them by agreement provided the patient is made aware of the fee distribution in accordance with medical ethics. The Committee felt that specific unit values for pre-operative, postoperative care and the actual surgery should not be included in the RVS.

Respectfully submitted,
B. R. BANCROFT, M.D.,
Chairman.

SUPPLEMENTAL REPORT OF RELATIVE VAULE STUDY COMMITTEE

After reading the report submitted by B. R. Bancroft, M.D., chairman of this committee, we have noted areas of disagreement and have therefore felt obligated to submit a supplemental report.

Only one meeting of this committee was called by the chairman on June 16, 1971. Committee members present at that meeting included Donald Purvis, M.D., Orin Hayes, M.D., Lyle Nelson, M.D., and the chairman, B. R. Bancroft, M.D.

At the meeting, notice was given to the committee that the House of Delegates in April, 1971 directed by the RVS Committee to establish Relative Values for preoperative care and postoperative care and make recommendations to the next meeting of the House of Delegates.

A long discussion followed which included a review of the California RVS, the need to adopt the AMA terminology of CPT, and numerous current deficiencies in the Nebraska RVS:

Deficiencies:

a. Numerous new pathology procedures not listed in the old book.

b. Numerous new radiology procedures not listed before.

c. Numerous new surgical procedures not listed before.

d. Numerous new medical care techniques (coronary care, cardioversion, etc.) not previously listed.

e. Although recent updating had resulted in approval of 25% for surgical assistance, no provision had been made for preoperative and postoperative care by non-surgical medical personnel. (Internist, Pediatrician, Cardiologist, F.P., etc.).

Dr. Bancroft's personal opinion was that adequate provisions existed in the area of surgical fees for the referring physician. However, the committee members present questioned his interpretation but deferred action until the next meeting and pending a report of a NSMA questionnaire response.

A study of the desirability of a complete RVS review was suggested and Dr. Bancroft volunteered to write up this survey to be sent to each specialty society. Such a questionnaire sent only to NSMA members resulted in a high percentage of the respondents in favor of the review, but in spite of this, Dr. Bancroft has recommended no action.

The following recommendations are made by majority of the RVS committee and submitted not as a minority report, but as a supplement to Dr. Bancroft's report.

I.

WHEREAS, it is occasionally not feasible for the attending surgeon to provide all aspects of preoperative and postoperative care himself,

THEREFORE, be it resolved that the NSMA does hereby recognize the value of preoperative and postoperative care and does hereby amend the NSMA-RVS of 1965 to include the following modifier codes: (For attending physician).

a. Preoperative Care — (This includes establishment of diagnosis and evaluation of patient's ability to tolerate surgery and anesthesia) 10% of the usual RVS factor for the surgical procedure.

b. Postoperative Care — 20% of the usual RVS factor for the surgical procedure.

II.

The committee further recommends that the House of Delegates establish whether this modifier should be added to the total surgical fee or where indicated, be subtracted from the total surgical fee. Most likely, since the advantage of more than one doctor adds to the overall benefit of patient care, this should be added to the total surgical fee in the same way that the surgical assistance fee is arrived at by adding 25% to the total surgical fee.

III.

The committee further recommends that the RVS book be upgraded by complete review to:

1. Add new procedures.
2. Correct terminology to be coincident with AMA current terminology.
3. Permit special organizations to equilibrate new procedures with old ones so that new physicians and third-party carriers will be able to more closely evaluate a procedures value.
4. Update a document now over five years old.
5. Sufficient funding should be provided to start this rather expensive proceeding.

Respectfully submitted,
LYLE H. NELSON, M.D.
DONALD F. PURVIS, M.D.
ORIN R. HAYES, M.D.

REPORT ON AD-HOC COMMITTEE ON PHYSICIAN'S ASSISTANT

Dean McGee, M.D., Lexington, Chairman; William DeRoin, M.D., Omaha; Dan A. Nye, M.D., Kearney; Robert Waters, M.D., O'Neill; Joe Saults, M.D., Mullen; Warren Miller, M.D., Columbus; Donald Pavelka, M.D., Omaha; John P. Heinke, M.D., Scottsbluff.

PURPOSE:

Pursuant to the passage of LB 985 by the Nebraska 1971 Legislature. In summary this bill instructs the University of Nebraska to establish a program of training of physician's assistants, defined as "a person who is qualified by training and experience to act as an assistant to a licensed physician and who performs any act, task, or function at the direction or under the supervision of such physician."

MEETINGS:

July 1, 1971 — Holiday Inn, Grand Island, Nebraska. The committee held discussion with Miss Darlene Cording and Mrs. Helen Krieger representing the Nebraska Nurses Association; Doctors J. P. Tollman and Paul Hodgson representing the University of Nebraska College of Medicine, and Doctor Henry Smith, Director of the State Department of Health.

September 30, 1971 — NSMA Offices in Lincoln. The committee met with members of the Public Health Committee of the Nebraska Legislature. Present: Senators Loran Schmit, David City; Thomas Kennedy, Newman Grove; Richard Lewis, Holbrook, and Glenn Goodrich, Omaha.

CONCLUSIONS TO DATE:

1. It is the concensus of opinion that for purposes of evaluating this problem that a physician's assistant is defined as a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician, who is responsible for the performance of that assistant.

2. The College of Medicine felt they were not equipped at present for such a training program and also felt that should such a program be instituted that a two-year training program would be necessary for proper training and necessary to warrant the cost of operating same.

3. Should physician's assistants be permitted in the State, it was the concensus of opinion he would be recognized by certification and would require suitable inclusion in state statutes. This would include standardization of certification of physician's assistants for purposes of reciprocity with other states.

4. Members of the State Legislature's Public Health Committee has expressed their firm desire to have guidance from the State Medical Association particularly in reference to January 1972 legislation concerning physician's assistants. They also requested hearing from doctors over the state concerning all health and medical questions as contrasted to only hearing from lobbyists. The Senators expressed the desires of their constituents that something must be done in the state to provide more medical services to all parts of the state.

5. Of primary concern was the need of polling communities over the state in establishing need for P.A.'s and other para-medical help. Included must be polling of members of the State Medical Association and members of the allied professions.

6. Reports are pending at present from the State Nurses Association and possible assistance from the Nebraska Health Project Survey.

RECOMMENDATIONS:

1. More investigation and evaluating is necessary to determine state needs of the PA, to provide sound guidance to the State Legislature.

2. Propose continuation of the present committee to pursue the above.

3. The cooperation of all members of the Association to carry out as complete a survey as possible. Programs of physician's assistants are underway in other states and it behooves each member to offer constructive as well as objective criticism.

Respectfully submitted,
DEAN A. McGEE, M.D.,
Chairman.

REPORT OF SUB-COMMITTEE ON ATHLETIC INJURIES

John G. Yost, M.D., Hastings, Chairman; Stanley M. Bach, M.D., Omaha; R. B. Benthack, M.D., Wayne; S. I. Fuenning, M.D., Lincoln; Paul Goetowski, M.D., Lincoln; L. R. Smith, M.D., Kearney; John E. Murphy, M.D., Aurora; George Sullivan, R.P.T., Lincoln; Wayne Wagner, A.T., Omaha; Richard Hammer, M.D., Lincoln; C. J. Cornelius, M.D., Sidney; Jack Lewis, M.D., Omaha.

On August 20th, of this year, our committee again held a meeting on athletic injuries in Lincoln, and at this meeting had thirty-two physicians in attendance, with dentists, coaches, etc., a total of seventy-nine were present.

During the past six months, we have crystalized our program a great deal more concerning the determination of proper weights for wrestlers, and Doctor Dick Hammer is, this Fall, going to run workshops around the State so that all Class "A" schools that desire to participate in the program on a voluntary basis may send some member of their school in to learn the proper way of measuring. These figures will then be correlated by Doctor Hammer and the boys who make the State Tournament will be re-measured, and the two sets of figures will be correlated.

It is hoped that within the next few years we will have some very definite basic facts and can institute a relatively state-wide program. This is going to be a rather large program, because it is estimated that a minimum of 6,000 boys in Nebraska participate in wrestling on some level.

On October 30th we will again have another meeting of the Nebraska team physicians. At this meeting, two members of the staff of St. Luke's Hospital of Denver will present some of their experiences concerning the use of a helicopter and evacuation, as well as cardiac resuscitation at the stadium in Boulder.

Respectfully submitted,
JOHN G. YOST, M.D.,
Chairman.

PROGRESS REPORT OF NEBRASKA REGIONAL MEDICAL PROGRAM

The Regional Medical Program started in this Region in 1967 as the Nebraska-South Dakota Regional Medical Program was given a three-year planning grant. The Grantee for the program has been the Nebraska State Medical Association.

In January, 1970, the Regional Medical Program became operational with three projects: the Coronary Care Training and Support Program, the Communications Facility Project, and the Mobile Cancer Detection Project.

On July 1, 1971, the Nebraska-South Dakota Regional Medical Program was divided into two programs, with each state becoming a separate Region. The main office for the Nebraska Regional Medical Program is located in Lincoln, Nebraska. A planning office is located at Creighton University School of Medicine and the University of Nebraska College of Medicine, both located in Omaha, Nebraska.

The Regional Advisory Group is the governing body of the Program, originally comprised of 70 members from the states of Nebraska and South Dakota. As of July 1, 1971, it is presently comprised of 34 members. Representation includes practicing physicians, nurses, physical therapists, pharmacists, hospital and nursing home administration officials, members from the voluntary health organizations, Comprehensive Health Planning, and members of the lay public. The members of the Regional Advisory Group are geographically represented throughout the state of Nebraska. Close cooperation has been established with Comprehensive Health Planning, the State Department of Health, and other health related organizations. Examples of the cooperation between agencies such as Comprehensive Health Planning and the Regional Medical Program is the research project being developed by the Comprehensive Health Planning on health needs for the state of Nebraska. On the committees of the Comprehensive Health Research portion are members of the Regional Medical Program staff. As needs have been developed by either Comprehensive Health Planning or the Regional Medical Program, a cooperative effort has developed between the two agencies so that there is no duplication. The information is shared between the two. Additional cooperation is provided by Comprehensive Health Planning "A" Agency and Comprehensive Health Planning "B" Agency representation on the Nebraska Regional Advisory Group.

The Program since becoming operational has involved itself in three major projects and several feasibility studies, pilot projects and workshops.

The Coronary Care Training and Support originally located in six training institutions in the two states has given formal courses for physicians, nurses, and technicians. A total of 55 physicians have been trained in three- and five-day workshops at various locations. There have been 402 nurses trained in 23 courses. In 9 courses, there have been 47 technicians trained. There have been 8 External Cardiopulmonary Resuscitation courses given in cooperation with the Heart Association involving 251 medical personnel. These courses have been given in rural communities in Nebraska.

In August of 1969, a training system for Intensive Coronary Care was purchased by the Regional Medical Program and distributed throughout the states of Nebraska and South Dakota. A total of three training systems was purchased by the Program, and at one time three additional systems were loaned to the Regional Medical Program by the Company producing the materials. Using this material, a total of 806 registered nurses and licensed practical nurses have been trained throughout the state of Nebraska at a total of 16 locations. The program has been extremely well received by the participants with a very low attrition rate among the participants. We have case studies in the files showing that the training received in these courses have been responsible in physician opinion for the saving of patients' lives in small rural communities.

These training systems have been rotated in approximately three month sequences to these communities. Placement of the system will continue throughout the state either to new communities or as a repeat to communities who have previously used it.

The Communications Facility Project involves three aspects of continuing education. A media library service by which inservice training may be given in medical locations scattered throughout the states of Nebraska and South Dakota by utilizing filmstrips, films, tapes and other media material available from the library located in Lincoln, Nebraska. A total of 3,100 requests have been received since the library service began. A consultation service for inservice directors of training in various small hospitals in the two states is also provided.

A second service of the Communications Facility Project is the Drug Information Service, which has received a total of 1,660 drug information requests from the states of Nebraska, South Dakota, Kansas and Iowa since the beginning of the service on August 17, 1970. These requests have been received from physicians, nurses, pharmacists, dentists, veterinarians, and osteopaths. The service is primarily provided by a drug information pharmacist backed up by Clinical Pharmacologists from the two medical schools in Omaha.

The third service of the Communications Facility Project is a Tape Library Service. The main body of the tapes in this service is located at the University of Nebraska College of Medicine Library, using the facilities of the switchboard of the Nebraska Regional Medical Program as calls are received from the states of Iowa, Kansas, South Dakota and Nebraska. The tapes of approximately 5 minutes in length may be played immediately to the requester over the telephone lines giving outstate physicians and nurses up-to-date medical information.

At the present time, a great deal of emphasis is being placed in the area of drug abuse throughout the state of Nebraska. The Nebraska Regional Medical Program, because of its involvement with drug information, is providing a great deal of background information to communities in the state setting up drug abuse programs. One example is with the Junior Chamber of Commerce who is attempting to establish a state wide drug abuse program.

The Cancer Detection Project became operational in 1971. During the months of July and August, a total of 477 patients were screened with 73 suspects being found These suspects have all been referred to their family physicians in that area. Inquiries have been received from physicians in small rural areas requesting the services of the Mobile Cancer Detection Unit. Their requests are being reviewed for future placement of the unit. This unit is staffed largely by medical personnel from the Creighton University School of Medicine.

In addition to these projects, a number of workshops, seminars and telephone conferences have been presented in the two states. There have been 1,987 medical personnel participating in these programs. A programmed course in Electrocardiography is currently being offered to 352 nurses and 161 physicians through the mail from the central office in Lincoln.

Additional staff activity of the Regional Medical Program is currently being directed to the study of kidney disease and diabetes using Ad Hoc Committees of the Nebraska Regional Medical Program.

Respectfully submitted,
DEANE S. MARCY, M.D.,
Program Coordinator.

REPORT OF STATE PEER REVIEW COMMITTEE

Milton Simons, M.D., Omaha, Chairman: Dean C. Watland, M.D., Omaha: Richard L. Tollefson, M.D., Wausa; John C. Denker, M.D., Valley: K. Don Arrasmith, M.D., Omaha; Harold W. Keenan, M.D., Ogallala; Raymond J. Wyrens, M.D., Omaha; Kenneth T. McGinnis, M.D., Lincoln: Dwight W. Burney, Jr., M.D., Omaha; Hobart E. Wallace, M.D., Lincoln: John D. Baldwin, M.D., Lincoln: E. Stanley Pederson, M.D., Omaha; Kenneth F. Kimball, M.D., Omaha; Leroy W. Lee, M.D., Omaha.

This is a report of the Peer Review Committee of the Nebraska State Medical Association.

This committee has met on three occasions, July 29, August 11, and September 9, of 1971. The first meeting was that of an organizational type and was temporarily chaired by Doctor Mason. The committee is structured as follows:

ONE YEAR
- Dean C. Watland, M.D.
- Raymond J. Wyrens, M.D.
- Hobart E. Wallace, M.D.
- K. Don Arrasmith, M.D.
- Leroy W. Lee, M.D.

TWO YEARS
- Richard L. Tollefson, M.D.
- Kenneth T. McGinnis, M.D.
- John D. Baldwin, M.D.
- Harold W. Keenan, M.D.
- Dwight Burney, M.D.

THREE YEARS
- John C. Denker, M.D.
- Milton Simons, M.D.
- E. Stanley Pederson, M.D.
- Kenneth F. Kimball, M.D.

Doctor Simons is acting as temporary chairman.

An explanatory letter in regard to the State Peer Program has been sent to all of the members of the Association. In addition, the state has been divided into five districts, and the councilors in these districts have been asked to form their District Peer Review Committees. An exception to this is Douglas County, which has had a Peer Review Committee. This was formed by the President of the Omaha-Douglas County Medical Society.

An information form for initiation of the review process has been developed. A copy of this is enclosed. Those who might initiate such a review are the attending physician, the insurance carrier, the intermediaries, the patient, and a governmental agency. Requests for review received by the Nebraska State Medical Association staff must meet the following conditions:

(a) In fee disputes, coverage must provide for usual, customary, and reasonable fees under any given program.

b. Other appropriate avenues of settlement have been attempted.

c. Carriers should notify involved parties of delay in settlement of claim.

d. A medical review summary form must be completed by carrier.

The staff of the State Society notifies the concerned parties that a case has been received. This staff also initiates a medical review summary form and collects the supporting data. The case is referred by Chairman of the District Review Committee to a member of his committee for presentation. The staff will contact the appropriate District Review Committee Chairman who will determine which member of his Peer Review Committee is to prepare the case for presentation to the whole committee. A copy of this case will also be referred to the State Review Committee member who resides in the district where the case is being reviewed. The staff of the State Society is available to provide assistance in obtaining additional information. As soon as the case is ready for presentation, the District Committee member will notify the chairman of his district by the staff of the State Society that his case is ready for presentation. All concerned parties in regard to this case are notified by the staff of the State Society of the date of the meeting. The committee will issue opinions to all concerned parties in the form of a report, and/or recommendation. All of the concerned parties will be mailed a report by the State Society staff. If the case has been settled satisfactorily, it will be duly recorded and filed, however, if there is an appeal, the matter will then be sent to the State Peer Review Committee.

It is difficult to accurately predict or project the amount and type of activity which will be required in the various districts. There is some backlog of cases in the Douglas County area. A meeting with the major insurance intermediaries reveals that most of these problems revolve around so-called concurrent care, and length of stay. Both the District Committees, and State Committee will require the support of the House of Delegates of the Nebraska State Medical Association and all of its members. There is a great need for information to be available to all members of the Association. Many of the problems which arise and lead to disagreements, especially in the area of utilization requires documentation of the medical records. The physician must document both his office and hospital records in regard to substantiation of the diagnosis, the therapy provided, and the length of stay. The adequate documentation of these items is basic to any good medical record.

We would like to inform all members of the Association that members of the State Committee are available to meet with other District Committees and also members of this committee are available to speak at various County Medical Societies in regard to questions of peer review.

This committee recognizes its important role in medical practice in the state. We welcome any constructive help that any of the membership may provide.

We will strive to maintain a positive position in the various matters, and through these activities hope that we can hold the respect of our members.

Respectfully submitted,
MILTON SIMONS, M.D.,
Chairman.

RECOMMENDED PEER REVIEW INFORMATION FORM — NEBRASKA

I. Request for Review Submitted By
  a. Attending Physician ( )
  b. Insuring Organization ( )
  c. Insurer
  d. Patient ( )
  e. Government Agency ( )

II. Reasons for Review

____

____

____

III. Parties Involved
  M.D. (Attending)________________________
  M.D. (Consultant)_______________________
  M.D. (Consultant)_______________________
  Patient________________________________
  Insurance Organization___________________

IV. Services and Fees
  M.D. (Attending)________________________
  M.D. (Consultant)_______________________
  M.D. (Consultant)_______________________

V. Name of Hospital and Periods of Hospitalization

____

____

VI. Period of Aftercare

____

VII. Action to Date With Respect to Settlement

____

____

  a. Has Insurer Contacted Physician?
  Yes ( ) No ( )
  b. List Any Attached Documents

____

VIII. Additional Information

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____

____

IX. Action Taken (Forward to State)

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REPORT OF SCIENTIFIC SESSIONS COMMITTEE

Herbert E. Reese, M.D., Lincoln, Chairman; L. Palmer Johnson, M.D., Lincoln; Stanley Truhlsen, M.D., Omaha; Warren Q. Bradley, M.D., Lincoln; Charles Ashby, M.D., Geneva; George Loomis, M.D., Omaha; Richard Cottingham, M.D., McCook; Russell L. Gorthey, M.D., Lincoln.

The Scientific Sessions Committee has met on two different occasions and a program has been outlined. The committee has elected to continue with the previous year's format of panel discussions.

One of the Scientific Sessions will deal with Socio-Economics and specifically with National Health Insurance Programs. Assistance here is being obtained through the American Medical Association. The members of the panel are presently being contacted. It is hoped that we can also obtain Vice President Spiro Agnew as one of the distinguished speakers keynoting this particular session. Contact has been made and this possibility certainly exists.

Another Scientific Session will deal with a Symposium on Exercise and Physical Fitness and a great deal of assistance has been obtained through the American Medical Association, Dr. Kenneth Rose, and the President's Committee on Physical Fitness in obtaining a panel and program. Presently the committee is trying to obtain a commitment from one of the astronauts for this session.

The two other Scientific Session Programs will deal with clinical problems encountered in a general family practice. These panels will be made up of family practice physicians and specialists discussing specific clinical problems.

Following this report is our tentative outline of the program of the Nebraska State Medical Association.

Respectfully submitted,
HERBERT E. REESE, M.D.,
Chairman.

PROGRAM

NEBRASKA STATE MEDICAL ASSOCIATION
104TH ANNUAL SESSION

April 30, May 1, 2, and 3, 1972
Hotel Cornhusker — Lincoln, Nebraska

SUNDAY, APRIL 30, 1972

1:30 p.m.	Board of Councilors
3:00 p.m.	House of Delegates
5:00 p.m.	Reference Committees

MONDAY, MAY 1, 1972

8:00 a.m.	House of Delegates
10:30 a.m.	Nominating Committee
11:00 a.m.	Board of Councilors
12:00 Noon	SPORTSMAN'S DAY (Lancaster County Medical Society)
1:00 p.m.	Scientific Movie Program (Hosting Club Facility)
5:30 p.m.	Sportsman's Social Hour (Lancaster County)
7:30 p.m.	Sportsman's Annual Awards Dinner (Lancaster County)

TUESDAY, MAY 2, 1972

7:30 a.m.	Board of Trustees
8:00 a.m.	Registration
8:00 a.m.	Exhibits Open
9:15 a.m.	Opening Ceremonies Welcome — Roger D. Mason, M.D., McCook, President Invocation — Necrology — George B. Salter, M.D., Norfolk
9:30 a.m.- 11:15 a.m.	"Symposium on General Practice"
11:15 a.m.	Nominating Committee
11:15 a.m.	Visit the Exhibits
12:00 Noon	Picnic Lunch Available (No Planned Program) OR Organized Luncheon —Vice President Agnew
2:00 p.m.	Visit the Exhibits
2:30 p.m.- 4:15 p.m.	Symposium on Socio-Economics "National Health Insurance Programs"
4:15 p.m.	Nominating Committee
4:15 p.m.	Visit the Exhibits
6:30 p.m.	President's Reception
7:00 p.m.	FUN NIGHT (Lancaster County Medical Society)

WEDNESDAY, MAY 3, 1972

8:00 a.m.	Registration
9:00 a.m.	Visit the Exhibits
9:30 a.m.- 11:15 a.m.	"Symposium on General Practice"
10:00 a.m.	Board of Councilors
11:15 a.m.	Visit the Exhibits
12:30 p.m.	Annual Distinguished Luncheon Presidential Address Installation of New Officers Presentation of 50-Year Pins Annual Distinguished Nebraska Lecture —Astronaut —Walter Judd, M.D. —Dwight Harkin, M.D., Boston, Massachusetts
2:00 p.m.	Visit the Exhibits
2:00 p.m.- 5:00 p.m.	"Symposium on Exercise and Fitness"
4:15 p.m.	Visit the Exhibits

REPORT OF ALLIED PROFESSIONS COMMITTEE

John Filkins, M.D., Omaha, Chairman; Robert Waters, M.D., O'Neill; Warren Q. Bradley, M.D., Lincoln; David L. Kutsch, M.D., Lincoln; Charles M. Bonniwell, M.D., Omaha; Bernie D. Taylor, M.D., North Platte; Mrs. Leland Olson, Omaha.

At a recent meeting of the Allied Profession Committee, three items were discussed. Two of the items considered were physician's assistants and aid to medical school applicants. Inasmuch as there was insufficient information available on these subjects, the committee felt that a more comprehensive report could be made to the House of Delegates at the Annual Session.

The third item discussed at our meeting concerned licensure of those persons in the allied health professions. During our discussion, it was reported that the American Medical Association and the American Hospital Association have already gone on record as recommending a moratorium on licensure in these allied fields. It was also noted that the Department of Health, Education, and Welfare has recommended to the Congress that a moratorium be declared.

Over the past several years, our Nebraska Legislature has been receiving increased pressure from many groups for licensure. It was the general feeling of the committee that licensure of allied health professions essentially places a restriction on the scope of their activity, and it was therefore the concensus of the committee that a recommendation on this subject be made to this session of the House of Delegates. Therefore the committee recommends to the House of Delegates of the Nebraska State Medical Association that this organization endorse a moratorium on the licensure concept as voiced by the American Medical Association, the American Hospital Association, and the Department of HEW. It is further recommended that this policy be made known to all members of the Nebraska Legislature and the Nebraska Congressional Delegation.

Respectfully submitted,
JOHN FILKINS, M.D.,
Chairman.

REPORT OF AD HOC COMMITTEE TO STUDY WELFARE

Houtz Steenburg, M.D., Aurora, Chairman; Wallace E. Engdahl, M.D., Omaha; Carlyle E. Wilson, Jr., M.D., Omaha; Warren Q. Bradley, M.D., Lincoln; Hiram Walker, M.D., Kearney; Carl J. Cornelius, M.D., Sidney.

The Ad Hoc Committee to study Welfare was created as a result of of Resolution #11 adopted at the Annual Session. Since the committee was appointed, two meetings have been held.

At the first session, the committee discussed its assignment. The committee learned that the resolution concerned primarily problems in pathology billing. The committee also felt it would be advisable to review all claim forms being used by the Welfare Department as well as the manner in which the Department promulgates rules and regulations and to visit with representatives of that Department.

At the second session of the committee, we met with Welfare representatives and recommended only minor changes in several of the forms currently being used by that Department. There was also discussion concerning rules and regulations put out by the Welfare Department and we were informed that a large majority of such rulings come from the Federal level. The matter of fees paid under the 1965 Relative Value Study was also discussed and the Federal freeze on physician's fees was discussed by the Welfare officials.

In general, the committee feels that while there are some problems existing with the program, that by and large there seems to be reasonable satisfaction among physicians with this program. The Ad Hoc Committee feels that the liaison created by House action provided for a mutual exchange of information which gave both groups a better insight into individual problems and procedures. The committee feels that its review of the program and meeting with Welfare officials essentially complies with the direction of the House of Delegates and asks to be relieved of further assignment.

Respectfully submitted,
HOUTZ STEENBURG, M.D.,
Chairman.

REPORT OF RURAL MEDICAL SERVICE COMMITTEE

Robert B. Benthack, M.D., Wayne, Chairman; R. L. Tollefson, M.D., Wausa; F. A. Mountford, M.D., Davenport; Michael J. Haller, M.D., Omaha; C. L. Retelsdorf, M.D., Omaha; Francis L. Land, M.D., Omaha.

The Second Rural Medical Day was held on April 15, 1971. Dr. Maynard Shapiro, Chicago, member of the American Academy of General Practice, talked to about 30 students at Creighton University School of Medicine in the morning, and to approximately 60 students at the University of Nebraska College of Medicine in the afternoon.

Following the afternoon lecture, the community exhibits were held in the University of Nebraska Hospital Cafeteria. Only one exhibit session was held this year for both Creighton University and the University of Nebraska. Forty four (44) communities exhibited this year compared to twenty eight (28) last year. The exhibits were well attended by about 300 students, house staff and wives. The committee was pleased with the cooperation in scheduling and use of facilities by Creighton University and the University of Nebraska College of Medicine. Financial support and program assistance was given by the Nebraska Chapter, Academy of General Practice.

Letters were sent to all members of the Legislature to notify them of the activity and inviting their attendance if possible.

The program offers an opportunity for the student or graduate to meet on a common ground with community representatives when advantages and opportunities in rural Nebraska may be discussed in a short time. As a result of this year's program, several communities have obtained services of a physician or physicians.

The present program appears to be successful and is beginning to bear fruit. The committee recommends continued support of this program.

During the past summer, a MECO Program was started in Nebraska with one student. MECO (Medical Education and Community Orientation) is a project for the establishment of educational programs in community health care institutions for students before their clinical years of medical training, between Freshman and Sophomore years. The overall purposes of the project are:

1. To expose the pre-clinical medical student to the "community" and to the total scope of health care delivery in the community.
2. To provide a variety of specific educational opportunities for preclinical students in community hospitals, group practice clinics, and other health care institutions.
3. To create a greater awareness between medical students and practicing physicians about health care delivery and solutions to current problems.

The committee feels that this program has much to offer in the education of the medical student in the problems and opportunities in community health care delivery. The committee believes expansion of and cooperation with the MECO Program in Nebraska is desirable and offers the following resolution:

> WHEREAS, Maldistribution of physicians in Nebraska and across the country contributes to health problems in rural areas and urban ghettos; and
>
> WHEREAS, Medical students make a more informed choice of medical careers when community health experiences are added to medical school curriculum; and
>
> WHEREAS, Medical students have offered leadership in development of community health experiences, such as the MECO Program; therefore be it
>
> RESOLVED, That the Nebraska State Medical Association commend Nebraska medical students for their initiative, energy and foresight in developing the MECO Project; and be it further
>
> RESOLVED, That the Nebraska State Medical Association offer active support and counsel to the medical students for community health projects.

Respectfully submitted,
ROBERT B. BENTHACK, M.D.,
Chairman.

REPORT OF POLICY COMMITTEE

Roger D. Mason, M.D., McCook, Chairman; C. R. Brott, M.D., Beatrice; J. Whitney Kelley, M.D., Omaha; Frank H. Tanner, M.D., Lincoln.

Your Policy Committee held several meetings in formal session and by telephone conference call since the April Session of the House of Delegates. The committee's efforts have been focused primarily on establishing and strengthening the physician member's stature in relation to various allied institutions and programs. It is well recognized that many forces affect the practicing physician in his role as a provider of services.

(1) Many of you are aware that Horace V. Munger, M.D., for health reasons, terminated his position as President-Elect of the N.S.M.A. The Policy Committee sincerely regrets this became necessary and would like to offer the following Resolution for consideration by the House of Delegates.

> WHEREAS, Horace V. Munger, M.D., has given many years dedicated service in healing the ills of the general public; and
>
> WHEREAS, His service to organized medicine has been most commendable; and
>
> WHEREAS, Doctor Munger's services in official positions in the Nebraska State Medical Association have been most appreciated; and
>
> WHEREAS, On September 1, 1971, for personal health reasons, it made it necessary that Doctor Munger resign his position as President-Elect of the Nebraska State Medical Association; therefore be it
>
> RESOLVED, That the House of Delegates of the Nebraska State Medical Association highly commend Doctor Munger for the efforts he has expended in behalf of our Association; and be it further
>
> RESOLVED, That Doctor Munger be extended a written indication of our wishes for continued recovery and the personal best wishes of all member physicians.

(2) The House of Delegates of the American Medical Association in June, 1971 adopted a Resolution which asked that state and local medical societies assign a committee the responsibility of considering health care of the poor and maintaining liaison with the A.M.A. Committee on Health Care of the Poor.

Our Association has a Committee on Geriatrics and this committee will be assigned the responsibility of considering the matter in light of the program and materials being developed by the American Medical Association.

(3) Activities of the Nebraska Regional Medical Program have been accelerating during recent months. Doctor Harold S. Morgan resigned as Program Coordinator on June 16 and Doctor Dean Marcy was hired to fill this position. Doctor Marcy had previously served as Deputy Coordinator and Director of the Coronary Care Project. Doctor Marcy has provided a progress report which will be considered by the House of Delegates during this session.

The Policy Committee was asked to consider the operation of the Nebraska Regional Medical Program's Mobile Cancer Unit and to define the operational methods and acceptable function of the unit. Basic criteria for the unit's function was developed and distributed to all County Medical Society Presidents on July 23, 1971. The committee understands that the unit is currently functioning satisfactorily under the guidelines established.

(4) The Policy Committee considered Resolution 74 passed by the Nebraska Legislature in 1971 and felt that a letter voicing the opinion of the Association should be sent each legislator. Such a letter was sent in July emphasizing that the medical manpower situation in Nebraska is a numerical manpower problem and not basically a problem of educational methods. The letter also pointed out that medical school admissions have been increasing and the accessibility to health care in our state is more readily available at the present time.

It is anticipated that the Association will be asked to comment in further detail on the manpower situation during the upcoming session of the Legislature.

(5) The Policy Committee was apprised of a project being carried on by several medical associations which directly focuses on a drug abuse situation. The intent of the project is to ask for an almost total ban on the prescribing of amphetamines and methamphetamines excepting those cases of currently recognized conditions which indicate use of these drugs. Physicians are also asked to review their prescribing practices to insure that all prescriptions for drugs with an abuse potential are written with caution.

The Policy Committee recommends that this program be initiated on Sunday, October 24th, and that publicity be distributed through the established pattern as developed by the Public Relations Committee of our Association.

(6) The President of the N.S.M.A. has been selected to serve on the committee assigned the task of nominating a replacement for Doctor Cecil Wittson, President of the University of Nebraska Medical Center. Doctor Mason asks that interested Association members contact him with suggestions or comments they might have.

Your Policy Committee has been busy carrying out the details and responsibilities assigned to it by the Association. The State Peer Review Committee has been appointed and has held several meetings. The specialty groups specified in the Ad-Hoc Committee Report were contacted for nominees and the committee was selected from those names. Through the N.S.M.A. councilors, the District Committees are being organized. Details of these activities are included in the Report of the State Peer Review Committee.

The Ad-Hoc Committee on the Physician's Assistant was also appointed and is reporting at this session of the House of Delegates.

Nebraska's Comprehensive Health Planning Agency's, federally financed, Westinghouse Study is well under way. Several N.S.M.A. members have been appointed to the various study groups and they have been most active. Organized medicine's voice is well represented and the participation of these men is greatly appreciated.

The Association will soon be approached regarding a position on National Health Insurance. The Policy Committee reviewed several aspects of the proposals that have been presented to Congress and feels the Medicredit Proposal of the A.M.A. to be the most desirable. The Policy Committee, therefore, recommends the House of Delegates endorse the A.M.A. sponsored Medicredit Proposal as the most desirable form of National Health Insurance.

The 1972 Session of the Nebraska Legislature, the 1972 Elections, and the continuing efforts to establish a National Health Insurance Program are but a few of the items which will be facing this committee and organized medicine in coming months.

The cooperation and assistance of Nebraska physicians is invited and actually solicited if we are to maintain the stature and position we have achieved. The Association must maintain its position of authority in all health matters and not allow fragmentation by those who would seek to destroy the free enterprise system of health care. Unity is paramount and we must work to this end.

Nearly all Association committees have been active working in their individual areas of interest as indicated by the number of reports at this meeting.

The Nebraska State Medical Association continues to provide and assure the most desirable atmosphere in which the physician can treat the ill. The Policy Committee stands ready to accept assignments of the House of Delegates and to represent to N.S.M.A. members the best of its ability.

Respectfully submitted,
ROGER D. MASON, M.D.,
Chairman.

REPORT OF PUBLIC RELATIONS COMMITTEE

William Griffin, M.D., Lincoln, Chairman; William S. Carter, M.D., Omaha; James Carson, M.D., McCook; Theo. Koefoot, M.D., Broken Bow; Donald Matthews, M.D., Lincoln; G. P. McArdle, M.D., Omaha; Carlyle Wilson, M.D., Omaha; John Clyne, M.D., Lincoln; Mrs. John C. Filkins, Omaha; Mrs. Leland Olson, Omaha.

The Public Relations Committee has met four times since its last Annual Report to the House of Delegates. The work of the committee and public relations efforts of the Association have been expanded considerably and the following is a composite of several of the areas of activity.

The Headquarters Office has distributed twenty-two news releases to all of the media with subject content including health care costs, the physician's assistant, programs sponsored by the N.S.M.A., and other matters.

The Association's Public Service Announcements (Health Tips) have been sent the media on a monthly basis. We will begin taping the radio material this month as an additional service to radio stations of the state. A total of 424 issues of newspapers produced 1,236 health tips from January through August, 1971. 109 Nebraska papers are using the health tip column. Radio and television usage of the spot announcements appears to be steadily increasing.

In an effort to implement the intent of Resolution #10 passed by the House of Delegates at its last Session, the committee surveyed the Association membership requesting guidance on how the physician might best utilize information about national health care supplied him for distribution to his patients. There were only forty-four returns of the survey forms. This is a very small percentage return for this type survey and indicates a high percent of the number may not be interested in the subject. Thirty-nine physicians stated they would display materials in their waiting rooms. A lesser number stated they would utilize their receptionist in the distribution of materials and less than one-half felt mailing pieces would be of value. The majority offered to use opinion forms to be completed by patients and offered to discuss such items as National Health Care Programs with their patients. The committee is currently developing a short opinion form that physicians can place in their waiting rooms for patient's completion. The information provided to the patient in such a form should be of real value.

Feature stories are currently being prepared for placement in Nebraska produced publications calling attention to organized medicine's attitudes on various topics of state and national concern. These will be placed in Nebraska produced publications similar in scope or intent as the article by Doctor Brott placed in the **Nebraska Farmer Magazine**. Publications were written and to date **Nebraskaland Magazine**, The League of Municipalities publication, and the **Lumber Merchant** have agreed to carry articles prepared by the N.S.M.A.

A three-part public opinion survey was carried on in the Hall of Health Exhibit at the Nebraska State Fair. One form dealt with the individual's opinion about national health insurance, the second asked for opinions on health care, and the third requested an opinion on the cost of health care. The results were most revealing producing an overall trend or set of criteria to guide the committee in its continuing public relations efforts. The intent is not to publish the results as there was no controlled sampling or exacting survey criteria applied to this informal opinion poll. There were 1500 returns for the seven-day Fair. Nebraska's Congressional Delegates will be informed of the trends which were discovered in this survey. The Hall of Health Exhibit this year included eighteen organizations participating in the effort including agencies from the professional, voluntary, official, and educational fields. The concensus of the participating organizations was that the Exhibit was successful and the Public Relations Committee plans to again sponsor the event in 1972.

The A.M.A. recently initiated a toll-free news service for radio stations with prerecorded messages. These are concise medical reports and featurettes intended for use in newscasts. The committee has informed the Nebraska radio stations of this available service. The stations may call toll-free at any time and receive the recorded news report of the week.

The Policy Committee of our Association has proposed in its report a statement calling for almost total ban of prescribing of amphetamines and methamphetamines. Physicians are also asked to review their prescribing practices to insure that all prescriptions for drugs with an abuse potential are written with caution. The Public Relations Committee endorses this concept and has developed the supportive information for distribution to the membership and release to the public press. This could very well be one of the most important programs ever undertaken by our Association and the total participation of our membership is solicited. (Attached to this report is a copy of the release to the public press scheduled for distribution to the press on Sunday, October 24th following final action by the House of Delegates. No prior use of the information by the media will be permitted).

The First-Aid Chart adopted by the committee is being developed jointly with the State Department of Health. It will be sent all Nebraska schools and again emphasized the interest of the N.S.M.A. in the health of all citizens.

Requests from the public as a result of placing our name for Citizens of Nebraska as a source of information on all health topics are still increasing. Appropriate data is sent the individual making the request with a personal letter acknowledging their request and offering assistance of the organization at any time in the future.

The committee discussed the fact that several physicians had not submitted their membership dues for the year 1971, but were members previously. The Chairman of the Public Relations Committee sent each of these physicians a personal letter requesting a response as to why membership was not taken. Many of the physicians have responded and various reasons were provided regarding membership. It appears many of the physicians will return to active membership as of January 1, 1972. Each response is being handled individually and assistance given to problems which might exist because of misplaced checks, incomplete communication, etc.

This has been a busy year for the Public Relations Committee and it appears the projects which are being considered or are underway will increase the committee's activity in months to come. The benefits derived through the utilization of the Thompson advertising agency have been of valuable assistance to the committee's efforts. Your committee enlists the support, assistance, and efforts of all Association members in working to further the goals of organized medicine and to broadly disseminate the philosophies and ideals under which we function.

Respectfully submitted,
WILLIAM T. GRIFFIN, M.D.,
Chairman.

NEWS RELEASE

October 24, 1971

Kearney, Nebr. — The President of the 1400-member Nebraska State Medical Association, Doctor Roger Mason of McCook, today announced details of a "new, vigorous thrust by this Association to limit the use of drugs as part of an over-all state-wide 'Drug Attack' program designed to help control drug abuse in Nebraska."

As the initial steps, Doctor Mason announced these plans:

1. A call on every physician to "put into effect an almost total ban on the prescribing of amphetamines and methamphetamines, with the exception of clearly recognized conditions where these drugs are indicated."

2. Appointment of a new committee, the Drug Abuse Education Committee, within the N.S.M.A.

3. Probable establishment of various sub-committees within the large committee.

Doctor Mason's announcement followed approval of the "Drug Attack" program by the policy-making body of the N.S.M.A., the House of Delegates, in session at Kearney. The group approved the plan Sunday.

Doctor Mason stated:

"Members of our Association have been greatly concerned about the drug abuse problem. President Nixon recently called on all physicians to launch an educational offensive against this medical-social problem.

"The Nebraska State Medical Association has kept in close contact with government officials about the problem here in our state. We know that state government, both at the executive and legislative level, is greatly concerned about the problem. We want to do all we can as individual physicians and as the association of physicians, to help meet the problem head-on."

Doctor Mason said that "in 1970 there were 3,400,000,000 dosage units averaging 10 mg. each of amphetamines produced in this country. This represents 16 dosage units for every man, woman, and child in this country. This must be reduced. Let me make it very clear that only a portion of this production reached the American people through medical prescriptions. I have been advised that the wayward amphetamine distribution is already receiving the closest scrutiny of the combined resources of the Federal Government in cooperation with the pharmaceutical manufacturers. Hopefully, this will be brought under control.

"We have extended to the Bureau of Narcotics and Dangerous Drugs our endorsement of the establishment of national production quotas and new procedures to tighten the distribution of these drugs.

"Our job as physicians is to constantly reassess drugs with an abuse potential, and to insure that we as physicians do not inadvertently contribute to drug dependency."

Doctor Mason called on every county medical society in Nebraska to establish — where not functioning — a drug abuse or other appropriate committee to focus the attention of the public on the life-saving potential of drugs when properly used; and to point out the extremely dangerous potential of even the most simple compound when improperly used.

He said that the newly formed Drug Abuse Education Committee will coordinate the new program, and additional segments of it as further activities in this area are pursued.

"We believe that our 'Drug Attack' will have an immediate result," the state president said. "A program similar to this in Texas and Louisiana has achieved tremendous effect. The new Drug Abuse Education Committee is made up of persons whom are experts in the drug field. Thus we are combining a program we know has worked elsewhere, with the best experts I know of in Nebraska, to work on this problem. We believe it will get results almost overnight.

"We are asking each physician to review his prescribing practices and exercise extreme caution in the writing of any prescriptions for drugs with an abuse potential. By such an approach the legitimate channel for drugs in this state will be as safe and controlled as it can be.

"Along with this, we are asking each physician to take a few minutes with each patient to explain the dangers if any, of the prescription with an abuse potential.

"I have discussed this matter with many of my Colleagues, and they feel, with me, that physicians must take the leadership in convincing the public that people cannot find happiness and satisfaction or expect to solve their social and emotional problems with a handful of tablets or a few grains of powder."

REPORT OF MATERNAL AND CHILD HEALTH COMMITTEE

Warren G. Bosley, M.D., Grand Island, Chairman; Hodson Hansen, M.D., Lincoln; Robert F. Getty, M.D., North Platte; William Rumbolz, M.D., Omaha; L. R. Smith, M.D., Kearney; J. A. McMillan, M.D., Hastings.

The Maternal and Child Health Committee met October 6, 1971. The first item discussed was evaluation of hearing in newborn infants in various hospitals in Nebraska. Dr. Robert Grant, Director, Maternal and Child Health Division, State Department of Health, has offered to discuss this testing with the speech and hearing group at the University of Nebraska and will report back at a later meeting. At the present time the committee has no recommendation to make.

There was an oral report given on Maternal Mortality data so far this year. There have been only two maternal deaths reported in 1971. Notice was taken of the report of the 1969 study which recently appeared in the Nebraska State Medical Journal.

The committee discussed various family planning projects which are now being developed. Dr. Grant described the project now being prepared by the State Department of Health. This would encompass 11-13 permanent clinics throughout the state to aid in family planning. No abortion counseling would be carried on in these clinics. It was noted also that in some areas of the state OEO-financed projects are also developing family planning activities. Dr. Grant stated that since funds for his projects and these OEO projects both come from federal funds, he felt that the Department of Health would be administering most of these eventually.

The question was raised about the minimum age of those patients to whom counseling would be given. Parental consent is a potential problem in this area. In this connection, Dr. Smith also raised the question of treating minors who have drug problems and/or venereal diseases. As a physician associated with a college, he stated he finds this an ever present problem. There were general consensus among the members of the committee that the Nebraska State Medical Association should take a position regarding treatment of the minor child and permission for this treatment, recognizing that the medical needs of the child must be met in the best or most expeditious way possible. **The Maternal and Child Health Committee recommends to the House of Delegates that support be given to a change in the present consent law to remove the requirement for parental consent for the medical treatment of minors.** The committee emphasized that the physician should still have the option to work within the framework of the family if he believes this to be the best approach.

Dr. Grant was asked to develop an outline of his family planning project which can be incorporated in the committee's report to the House of Delegates at a later meeting.

The committee also considered a report from the Department of Health on the rubella immunization program. The committee believes the figures presented in this report do not reflect the number of immunizations given in the physicians' offices and that generally there is better immunization throughout Nebraska than these figures lead one to believe. The committee does support the use of antibody tests either as premarital or prenatal.

The committee also considered the recommendation that smallpox vaccinations should no longer be mandatory. The committee decided that no action should be taken at this time, pending a recommendation from the State Department of Health. The committee suggests that before mandatory smallpox vaccinations can be discontinued, there may need to be some changes in existing local and state laws.

A proposal regarding the development of a birth defects prevention program in the State of Nebraska was considered, and the committee postponed action pending consultation with the Director of Health.

Respectfully submitted,
WARREN G. BOSLEY, M.D.,
Chairman.

REPORT OF CONSTITUTION AND BY-LAWS COMMITTEE

Houtz Steenburg, M.D., Aurora, Chairman; Richard Crotty, M.D., Omaha; Clyde Medlar, M.D., Columbus; C. G. Gross, M.D., Cambridge; Harold M. Nordlund, M.D., York; A. J. Alderman, M.D., Chadron; Harry McFadden, M.D., Omaha.

At the 1971 Annual Session of the House of Delegates, the Constitution and By-Laws Committee recommended and asked for approval to make an indepth review of the Constitution and By-Laws and bring their recommendations to this session. Since receiving this approval from the House of Delegates, the Constitution and By-Laws Committee has met and done a page by page analysis and review of this document.

On the succeeding pages are the recommendations of our committee which should update this document to meet current and future needs of the Association. For the information of the delegates, we have also included a copy of the current Constitution and By-Laws so that you may review on a page by page basis the proposed changes by our committee.

Respectfully submitted,
HOUTZ STEENBURG, M.D.,
Chairman.

CONSTITUTIONAL CHANGES

Remove word "State" from the name of the Association in the heading.

ARTICLE I — Delete word "State" in the name of the Association.

ARTICLE II — No change.

ARTICLE III — No change.

ARTICLE IV, Section 1 — Delete word "State" in the name of the Association; and delete words "and of the American Medical Association."
Section 2 — No change.
Section 3 — Add: (6) Student

ARTICLE V — No change.

ARTICLE VI, Section 1 — In third paragraph, delete words "on the first day of" and add: "during."
Sections 2 through 6 — No change.

ARTICLE VII — No change.

ARTICLE VIII — No change.

ARTICLE IX — Delete word "State" in name of Association.

ARTICLE X — No change.

ARTICLE XI — No change.

ARTICLE XII — No change.

ARTICLE XIII — No change.

ARTICLE XIV — Delete word "State" in name of Association

Delete words "4th day of October, 1969, and add: "24th day of October, 1971."

BY-LAW CHANGES

Page 11 — Section 1 — In first and second sentence, delete words, "and of the American Medical Association."

Section 2 — In first paragraph, delete word, "State" in name of Association, and the words, "and of the American Medical Association."

Page 12 — Section 3 — Delete the entire section and substitute the following wording:

> **"Associate membership may be issued through a component society to residents and interns in Nebraska who qualify under the licensure laws of this state and who have appointments in recognized hospitals in Nebraska and who pay dues as prescribed by the House of Delegates. Such membership shall prevail only for the period of such residency or internship and shall not entitle the holder thereof to hold office or vote in the Association except as provided in Chapter VI, Section 7, of these By-Laws. Associate members will be eligible to attend all meetings of the Nebraska Medical Association and receive the Nebraska Medical Journal and serve as members of standing committees. Associate membership in this Association does not qualify a member for membership in the American Medical Association, although on application he may register for the Scientific Session."**

Page 13 — A new Section 7 has been added and reads as follows: (Approved by House, April, 1971).

> "Student membership shall be granted to all regularly enrolled medical students of the University of Nebraska College of Medicine and the Creighton University School of Medicine upon direct application to the Nebraska Medical Association, or to the component student society, and payment of dues as prescribed from time to time by the House of Delegates. Student members will be eligible to attend all meetings of the Nebraska Medical Association and shall also be entitled to receive the Nebraska Medical Journal and serve as members of standing committees, but they shall not be entitled to hold office in the State Association."

The old Section 7 is now Section 8.

Page 14 — The old Section 8 is now Section 9.

The old Section 9 is now Section 10, and the word, "State" in the name of the Association is deleted in this Section.

The old Section 10 is now Section 11, and the word, "State" is deleted in the two references to the name of the Association in this Section.

Page 15 — Section 2 — In paragraph 1, delete second and third sentence and substitute the following:

> **"Dues, whenever paid, shall be for the current calendar year, except student and house staff memberships shall run from July 1st through June 30th of each year. The dues of an associate member and a student member shall be prescribed by the House of Delegates."**

In the second line, last paragraph, delete the word, "March" and insert the word, **"February."**

Page 16 — In the paragraph at the top of the page, delete words "March 31st" and insert **"the last day of February."**

Section 3 — in third paragraph, delete the word, "State" in the name of the Association.

Page 19 — Section 5 and Section 6 are deleted entirely.

Page 20 — Section 7 is now Section 5.

Page 22 — Section 4 — Delete the last paragraph and substitute the following:

> **"Members of the House of Delegates shall be officially seated at any meeting when they have answered the prepared roll call."**

Section 5 — The last sentence in this Section is amended to read:

> "Representation in the House shall not be accorded to a component society, or group of societies so organized, whose delegate or alternate is absent **unless approved by the House of Delegates."**

A new section 6 has been added and reads as follows: (Approved by House, April, 1971).

> "Four student delegates shall be entitled to hold a voting membership in the House of Delegates. There will be two delegates from each school, comprised of one junior and one senior medical student from the University of Nebraska College of Medicine, and one junior and one senior medical student from the Creighton University School of Medicine. **Such individuals must be current dues paying members.**

A new Section 7 has been added and reads as follows:

> **"Four delegates representing the House Officers Staff Association shall be entitled to hold voting membership in the House of Delegates. Two of these delegates shall be elected from the Creighton University House Staff Association and two delegates shall be elected from the House Officers Association of the University Medical Center. Such individuals must be current dues paying members."**

Page 25 — Delete, "(2) Report of the Committee on Credentials." from the order of business of the House.

The remaining order of business, (3) through (12) are renumbered.

Page 27 — A new Section 3 is added. The last paragraph, Page 29, will become this new Section 3, of Chapter IX.

Delete the word, "State" in the four references to the name of the Association in this new Section 3.

Page 29 — In "(10)" at top of page, delete the words, "the last paragraph of this section" and substitute, **"Chapter VIII, Section 3."**

The last paragraph on this page regarding Nebraska Medical Service becomes the new Section 3, of Chapter IX, page 27.

Page 30 — Section 2 — In "(7)", the second sentence is deleted and substituted by the following:

> **"These appointments shall be for the next ensuing year."**

Page 33 — Section 7 — In "(2)", delete the word, "State" in the name of the Association.

Page 34 — Section 9 — In the Second paragraph, delete the word, "shall" and substitute the word **"may."**

Delete the word "State" in the name of the Association.

Page 35 — In "(5)" delete "Section 9" and substitute **"Section 8."**

In "(10)", delete the word, "State" in the name of the Association.

Page 38 — Section 4 — In the third sentence, delete the word, "daily."

In the sixth sentece, delete, "Section 10" and substitute **"Section 9."**

Page 40 — Section 1 — Delete the first paragraph and substitute the following:

> **"The standing committees of this Association shall consist of at least six members each appointed annually by the President-Elect, except as otherwise provided in the By-Laws. The President-Elect may also appoint members and non-members to committees on an interim basis."**

Section 2 — Delete the wording of this Section and substitute the following:

> **"Members of the standing committees of the Association shall be appointed annually, except as otherwise provided in the By-Laws."**

Page 41 — The following committees are deleted: (Approved by House, April, 1971).

3. Blood and Blood Products
5. Cardiovascular
6. Civil Defense and Disaster
9. Continuing Committee on Medical Service
10. Credentials
11. Diabetes
14. Occupational and Industrial Health
22. Planning
24. Prepayment Medical Care

Page 41 — Change the name of "15. Insurance" to "Insurance and Prepayment Medical Care." (Approved by House, April, 1971).

Page 42 — The following committees are deleted: (Approved by House, April, 1971).

27. Rehabilitation
31. Tuberculosis and Other Respiratory Diseases

Two new committees are to be added to this listing as follows: (Approved by House, April, 1971).

Emergency Medical Service
Peer Review

The following committee was inadvertently omitted in committee listing in the previous By-Laws:

26. Public Relations

All committees in this listing will be alphabetized and renumbered.

Page 42 — In "1.", delete the word, "State" in the two references to the name of the Association.

"3." is deleted entirely. (Approved by House, April, 1971).

Page 43 — "5." and "6." are deleted entirely. (Approved by House, April, 1971).

In "8.", delete the word, "State" in the name of the Association.

Page 44 — "9." and "10." are deleted entirely. (Approved by House, April, 1971).

Page 45 — In "13.", third line, delete the word "and," and following the words, "general policies," add the words "and procedures." (Approved by House, April, 1971).

"14." is deleted entirely. (Approved by House, April, 1971).

In "15.", delete the entire definition and substitute the following: (Approved by House, April, 1971).

> "The Committee on Insurance and Prepayment Medical Care shall concern itself with insurance contracts incident to the practice of medicine and of importance to the Association members. The Committee shall also be a liaison committee between the members of the Nebraska Medical Association and the Nebraska Medical Service (Blue Shield). It shall convey to the Nebraska Medical Service (Blue Shield) any complaints, criticism and/or constructive suggestions received from the members of the Nebraska Medical Association.
>
> "The Committee on Insurance and Prepayment Medical Care shall also make its services and counsel available to all other companies doing business in the health insurance field.
>
> "It shall be conversant with the work being done by the Council on Medical Service of the American Medical Association, and shall cooperate with this Council in furthering its purpose.
>
> "It shall report annually to the Board of Councilors and to the House of Delegates the progress made and the methods of operation of the Nebraska Medical Service. No members of the Board of Directors or officers of the Nebraska Medical Service shall be eligible for appointment to this Committee."

Page 47 — In "21.", delete the word, "State" in the name of the Association.

"22." is deleted entirely. (Approved by House, April, 1971).

"24." is deleted entirely. (Approved by House, April, 1971).

Page 48 — In "25.", first line, following the words, "public health," add the words, "and occupational health." (Approved by House, April, 1971).

In "26.", delete the word, "State" in the two references to the name of the Association.

"27." is deleted entirely. (Approved by House, April, 1971).

Page 49 — In "28.", delete the last sentence entirely.

"29." is amended to read as follows:

> "The Committee on Rural Medical Service shall foster the practice of medicine in rural Nebraska and cooperate with organized farm groups of Nebraska to further the objectives of the Committee on Rural Medical Service of the American Medical Association."

In "30.", in last paragraph delete, "Sections 1, 5 and 6." and substitute, "Section 1."

Page 50 — "31." is deleted entirely. (Approved by House, April, 1971).

Add two new committees and their definitions as follows:

(1.) (This committee and definition was approved by House, April, 1971).

> "The Emergency Medical Service Committee shall concern itself with emergency health planning and operation. The Committee shall serve as the Association's representative in the dissemination of information regarding the development and implementation of remedial measures pertaining to national emergencies, local disaster situations and transportation safety. The Committites shall coordinate their activities with other agencies expending their efforts in developing emergency preparedness technique."

(2.) "**The functions of the State Peer Review Committee shall be as follows:**

1. To act as a State Peer Review Committee to which decisions of the District Peer Review Committee may be appealed, either by the Physician, the patient or the third party carrier.
2. To aid in the establishment of, and coordination of the District Peer Review Committees.
3. To establish, with consultation of existing Peer Review Committees, the mechanisms of gathering information, the recording, and the analysis of, cases reviewed so that there can be a uniform method of peer review activities in Nebraska.
4. To advise all interested parties of the mechanisms established for initiating peer review in Nebraska.
5. To educate the physicians of Nebraska as to the function and meaning of peer review as well as to disseminate medically useful information obtained from such peer review activities.
6. The activities of all the Peer Review Committees shall have no disciplinary function. If cases are reviewed in which it appears disciplinary actions should be considered, these would be referred to the Council on Professional Ethics for their consideration. In addition, the State or District Peer Review Committees will refer to the appropriate standing committees of the Nebraska Medical Association, any other matters that it encounters that are outside the purview of peer review.
7. To establish at their discretion an advisory committee of specialists as required to assist the State Peer Review Committee and District Peer Review Committees in completing proper review of a case. The details of this Committee are left to the discretion of the State Peer Review Committee.

The State Peer Review Committee shall consist of fourteen members who are members of the Nebraska Medical Association and actively engaged in the private practice of medicine, appointed by the President of the Nebraska Medical Association. Membership shall consist of:

1. Four members who are engaged in General Practice and at least one of whom is a member of the American Academy of General Practice or certified by the Board of Family Practice.
2. One urologist.
3. One orthopedic surgeon.
4. One general surgeon.
5. One internist.
6. One obstetrician-gynecologist.
7. One pathologist.
8. One radiologist.
9. One psychiatrist
10. One anesthesiologist
11. One pediatrician.

All of the members listed above, with the exception of those in Category #1, shall be certified by their respective Specialty Boards. The Committee members should be selected on the basis of geographical distribution to be representative of all areas in Nebraska. The Committee will elect its own chairman. No member may be appointed to any of the Peer Review Committees in Nebraska who is serving as a medical director of a third party carrier or serving as a member of its Board of Directors. No member of any Peer Review Committee should sit in review of his own case.

The term of service on the Committee shall be three years with the terms to be staggered as follows for the initial Committee:

1. Five members — one year.
2. Five members — two years.
3. Four members — three years.
4. No physician may serve continuously in excess of six years.

Page 50 — Section 3 — Delete the word, "State" in the name of the Association in the first paragraph.

In the third paragraph, delete the word, "State" in the name of the Association; and delete the words, "excessive fees."

Page 51 — In "4.", delete the word, "State" in the two references to the name of the Association.

Page 52 — Section 1 — Amend the first line of this Section to read as follows:

> "County, District, House Staff or Student Societies adopting principles of . . ."

Page 53 — Section 3 — Delete the word, "State" in the name of the Association.

Section 4 — Delete the word, "State" in the name of the Association in the second paragraph.

Page 55 — Section 1 — Delete word, "State" in the name of the Association and in the name of the Journal.

Section 2 — Delete the word, "State" in the name of the Association.

Page 57 — Chapter XV — Delete, "Robert's Rules of Order, Revised," and substitute, "Sturgis Parliamentary Procedure." (Approved by House, October, 1970).

Chapter XVII — Delete the word, "State" in the name of the Association.

Delete the words, "4th day of October, 1969" and substitute "24th day of October, 1971."

Report of Board of Councilors

The Fall Meeting of the Board of Councilors was held October 22, 1971, at the Holiday Inn, Kearney, Nebraska.

Councilors present were Doctors H. C. Stewart, Robert Benthack, Houtz Steenburg, Lyle Nelson, Robert Waters, Hiram Walker, Charles Landgraf, Jr., and Bruce Claussen.

The Chairman, Doctor Steenburg, called for election of a Chairman of the Board of Councilors. Doctor Stewart moved that Doctor Steenburg be reelected as Chairman, and this was unanimously approved. Election of a Secretary was called for, and it was moved that Doctor Alderman be elected. This was unanimously approved.

The minutes of the 1971 Annual Session meetings of the Board of Councilors were approved as printed in the July issue of the Nebraska State Medical Journal.

The reports and resolutions contained in the Handbook were considered. All reports and resolutions were approved, with the exception of amendments and recommendations on the following.

In considering the report of the Executive Secretary, Mr. Neff called attention to the section of his report concerning the retention of the tapes of the sessions of the House of Delegates. There was discussion regarding the necessity of retaining these for the five years suggested in this report. It was moved and seconded to amend this section of the report to retain the tapes for one year rather than five years. This was approved.

In considering the report of the Relative Value Committee, Doctor Nelson, a member of this committee, presented a supplementary report to the Board which contained specific recommendations. Doctor Landgraf moved that the report of the Relative Value Study Committee be amended to include this supplementary report given by Doctor Nelson, and this was approved. The report of the Relative Value Study Committee was approved as amended.

The report of the State Peer Review Committee was discussed, and it was moved that the Board of Councilors recommend to the House of Delegates that as part of the activities at the Annual Session, there be discussion and review of peer review to the end that the membership of the Nebraska Medical Association be thoroughly educated about peer review. This was approved. It was also suggested that the title of Peer Review District be changed to Peer Review Area to avoid confusion with Councilor District.

In considering Resolution #2, Limitation on Drug Refills, there was discussion regarding "limitation of six refills," and it was suggested that the wording be changed to "a **maximum** of six refills."

Approval was given to the list of 50-Year Practioners and Life Membership requests.

Mr. Neff informed the Councilors that Doctor Leo Haywood, Chairman of the Council on Professional Ethics, had resigned from the Council. It was the decision of the Councilors that the Omaha-Douglas County Medical Society should be contacted for their recommendation for a replacement of Doctor Heywood.

The Board of Councilors directed that an appropriate message or resolution be sent to Doctor Bell, who has resigned as Councilor of the Second District, due to a heart attack.

There being no further business, the meeting was adjourned.

Report of House of Delegates

FIRST SESSION

The first session of the Fall Meeting of the House of Delegates was held October 23, 1971, at the Holiday Inn, Kearney, Nebraska. The meeting was called to order by the Vice Speaker, Dr. McFadden.

Roll call showed 50 delegates present, and the meeting was declared in session.

A report on AMA-ERF was presented to the House of Delegates by Mrs. J. Whitney Kelley.

Requests were received from the Adams County Medical Society, Omaha-Douglas County Medical Society, Lancaster County Medical Society and Holt and Northwest County Medical Society to seat delegates not previously certified. These requests were approved.

Dr. McFadden requested that Dr. Landgraf serve as Vice Speaker pro tem, and this was approved by the House.

Dr. Best was asked for a report of the Board of Trustees. Dr. Best stated that due to the resignation of Dr. Horace Munger as President-Elect, it became the duty of the Board of Trustees to select a nominee for this office to present to the House of Delegates. The Board had requested that the Lancaster County Medical Society provide them with a list of candidates, and from these recommendations the Board of Trustees placed in nomination Dr. Frank P. Stone of Lincoln for the office of President-Elect. Unanimous approval was given by the House of Delegates.

The Annual Session minutes of the House of Delegates were approved as published in the July, 1971, issue of the Nebraska State Medical Journal.

Dr. McFadden informed the House that due to the resignation of Dr. Charles Bell as Councilor of the 2nd District, the Board of Councilors had elected

Dr. Louis Gogela as interim Councilor. Dr. McFadden called for confirmation of this by the House, and this was approved.

Medical student representatives were introduced to the House, Mr. Dale Michels and Mr. Steve Plettner from the University of Nebraska College of Medicine; and Mr. John Motl and Mr. Paul Montague from the Creighton University School of Medicine.

The following oral reports were presented to the House:

Dr. J. P. Gilligan, Chairman, Medicolegal Advice Committee

Dr. Roger D. Mason, Professional Liability Program of the Association

Dr. Roger D. Mason, Medical Service Committee.

This report was referred to Reference Committee #7.

Dr. John R. Schenken, Delegate to the A.M.A.

This was referred to Reference Committee #7.

Dr. Joseph Holthaus, Dean, Creighton University School of Medicine

Dr. Robert Kugel, Dean, University of Nebraska College of Medicine

Dr. Dan A. Nye, Chairman, Advisory Committee on Comprehensive Health in Nebraska

Selections of members for Reference Committees were read and the following assignments made:

Reference Committee #1

Report of the Board of Trustees
Report of the Editor
Report of the Executive Secretary
Report of Delegate to North Central Medical Conference
Progress Report of Nebraska Regional Medical Program
Resolution #7—Re: Certain Facets of Nebraska Health Responsibility Program
50-Year Practitioners and Life Memberships

Reference Committee #2

Report of Insurance and Prepayment Medical Care
Report of Relative Value Study and Supplemental Report
Report of Ad Hoc Committee to Study Welfare
Resolution #4—Re: Removal of Health Insurance Exclusion for Children
Resolution #2 from Annual Session Meeting (for referral to Committee)

Reference Committee #3

Report of Constitution and By-Laws

Reference Committee #4

Report of Medicine and Religion
Report of Ad Hoc Committee on the Physician's Assistant
Report of Scientific Sessions
Report of Allied Professions
Report of Maternal and Child Health

Reference Committee #5

Report of Mental Health and Retardation
Report of State Peer Review
Report of Rural Medical Service
Resolution #1—Re: Labeling of Drugs
Resolution #2—Re: Limitation on Drug Refills
Resolution #5—Re: Admission to a Psychiatric Hospital by Certification Method
Resolution #8—Re: Peer Review

Reference Committee #6

Report of Emergency Medical Service
Report of Geriatrics
Report of Health Education in Schools and Colleges
Report of Medical Education
Report of Sub-Committee on Athletic Injuries
Resolution #3—Re: Opposition to Burying of Radioactive Wastes and Utilization of Fission Reactors

Reference Committee #7

Report of Delegate to A.M.A.
Report of Policy
Report of Public Relations
Report of Medical Service
Resolution #6—Re: Treatment of Chronic Severe Renal Disease

Dr. Peck requested that a correction be made in the wording of Resolution #6 from the Buffalo County Medical Society. In the third line of the "Resolved," delete the word "residents" and insert "Welfare recipients."

Dr. Chleborad requested that Resolution #2, referring to a uniform operative and sterilization permit, which was approved by the House at the Annual Session, be given to a Reference Committee for referral to the proper committee of the Association. This was referred to Reference Committee #2.

Dr. Wilson moved that the President officially communicate to Dr. Cecil Wittson the appreciation of this House for his fine service to the State of Nebraska. This was unanimously approved.

Resolutions from the floor were called for, and Dr. Gogela presented Resolution #8, regarding Peer Review, from the Lancaster County Medical Society. This was referred to Reference Committee #5.

There being no further business, the House was adjourned until Sunday morning.

SECOND SESSION

The second session of the Fall Meeting of the House of Delegates was held October 24, 1971. The meeting was called to order by Dr. Landgraf, Vice Speaker pro tem.

Roll call showed 47 delegates present, and the House was declared in session.

The minutes of the first session were approved as printed.

Requests to officially seat delegates were received from Omaha-Douglas County Medical Society and Buffalo County Medical Society, and these were approved.

The Chair called for suspension of the rules to change the order in which Reference Committee reports were heard, and this was approved. The following Reference Committee reports were presented:

Reference Committee #1

Members of your Reference Committee #1 were Drs. Warren Bosley, Chairman; Louis Gogela, and James Schlichtemeier.

Your Reference Committee recommends approval of the Report of the Editor, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the Report of the Board of Trustees, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the Report of the Executive Secretary, and we would draw the attention of the House to the action taken by the Board of Councilors regarding retention of tapes. Your Reference Committee recommends that the tapes of the sessions of the House be retained for one year.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the Report of the Delegates to the North Central Medical Conference, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the following 50-Year Practitioners:

Arthur W. Anderson, M.D., Ingleside
R. Russell Best, M.D., Omaha
J. Dewey Bisgard, M.D., Omaha
Price Terrell, M.D., Omaha

We also recommend approval of the following requests for Life Membership:

L. V. Gibson, M.D., Lincoln
Horace V. Munger, M.D., Lincoln
Meyer Beber, M.D., Omaha
Theodore Drdla, M.D., Omaha
Henry L. Dworak, M.D., Omaha
Thomas L. Weekes, M.D., Nebraska City

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends approval of the Progress Report of the Regional Medical Program, with a question regarding the last paragraph. In its session on April 29, 1970, the House of Delegates approved the Regional Medical Program with the provision that it restrict its interests to cancer, heart disease and stroke. We recommend acceptance of this last paragraph only as kidney disease and diabetes **directly** relate to these three diseases.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed relative to restricting this to the three diseases. However, it was pointed out that the original law provided for cancer, heart disease, stroke and related diseases. This section of the Reference Committee report was approved.

Your Reference Committee was given the following Resolution #7, introduced by the Four County Medical Society:

> WHEREAS, the Nebraska Health Responsibility Program introduces itself with a fallacy, and
>
> WHEREAS, it forces hospitals into conforming with a
>
> 1. Health Care Planning Agency Conformance Agreement
>
>   "If health care costs are to be contained, it is essential that unnecessary duplication of facilities and services be prevented. This goal can be achieved more readily and desirably through voluntary comprehensive health care planning."
>
> 2. Performance Information Disclosure
>
>   "If the public is to both better understand the health care industry and be assured that there is an effective and objective evaluation of the financial requirements of participating hospitals, it must be furnished with relevant data on hospital costs and performance. Participating hospitals shall, therefore, arrange for public disclosure, through a mutually acceptable agency, of relevant data on their operational costs and performance."
>
> 3. Utilization Review Program
>
>   "Cost containment is a complex problem which can be satisfactorily solved only by imaginative action on a broad front. However, one of the basic steps necessary to assure that the public receives the most desirable balance of high quality care at the least possible cost is the operation of effective, on-going utilization review programs. Therefore, participating hospitals cannot avoid this operation of functioning utilization review programs. Additionally, in order to enable these programs to operate with maximum efficiency and effectiveness, statistical data display systems such as PAS-MAP, HUP, BCDS, QUEST, etc., shall be employed. As a steward of public funds, Blue Cross is obligated, on behalf of the public which it represents, to assure the quality of care which it helps to purchase. In order to carry out this responsibility, participating hospitals shall allow Blue Cross to periodically conduct an audit of their utilization review performance and activities."
>
> WHEREAS this whole Nebraska Health Responsibility Program contains numerous other objectionable features, therefore,
>
> BE IT RESOLVED that the House of Delegates of the N.S.M.A. appoint a committee to study this program in depth and report their conclusions to and recommendations to the next meeting of the House of Delegates.

Your Reference Committee heard considerable discussion on this resolution from a representative of Four County Medical Society, Blue Cross and other interested physicians. Your committee believes that the document entitled, "Nebraska Health Responsibility Program" does present many disturbing concepts. We believe that this report and Resolution #7 should be studied thoroughly, and that they be referred to the Insurance and Prepayment Medical Care Committee with a suggestion that an ad hoc sub-committee might be appointed to give these full and complete evaluation. The sub-committee might then report to the parent committee since this committee does have broad experience in the general field of insurance and the physician relationship thereto. We would ask that the Insurance and Prepayment Medical Care Committee report at the next meeting of the House of Delegates.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #1 AS A WHOLE. This was approved.

Reference Committee #2

Members of your Reference Committee #2 were Drs. C. J. Cornelius, Chairman; C. Lee Retelsdorf, and Frederick Hathaway.

Your Reference Committee considered Resolution #2, which was approved at the Annual Session and recommend that this resolution be referred to the Medicolegal Advice Committee for implementation.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered Resolution #4, introduced by the Omaha-Douglas County Medical Society, as follows:

> WHEREAS it is recognized that the nation's most valuable resource is its children, and
>
> WHEREAS it is recommended that every infant receive quality medical supervision in the earliest period of life, and
>
> WHEREAS the private insurance industry, including Blue Shield, offers exclusion from coverage for the first fourteen days of life in many policies, and
>
> WHEREAS certain health problems in children are readily identified and best treated in the first days of life, and consequently, this exclusion is not for the benefit of child health nor the family's well-being, therefore,
>
> BE IT RESOLVED that the State Medical Society of Nebraska vigorously supports the eradication of the fourteen day exclusion clause from all health insurance policies sold in the state.

Your Reference Committee was disappointed that no representative of the Nebraska Chapter of the Academy of Pediatrics was in attendance. Inasmuch as the intent of the resolution could not be determined, i.e. whether it referred strictly to the care of illness or rather to routine newborn care, it is recommended that this resolution not be adopted. For information of the House, the committee is advised that infants are covered for illness or congenital abnormality from the day of birth by Nebraska Blue Shield.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered the report of the Ad-Hoc Committee on Welfare and recommends approval of the report except for the last sentence. We recommend that this committee continue to function until such time as the proposed form revisions are available from the Welfare Department for the committee's final review and approval.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered the report of the Insurance and Prepayment Medical Care Committee and recommends approval of this report. For the information of the House, the physician Advisory Committee alluded to in Paragraph 3, is one independently constituted by Blue Shield consisting of eight practicing physicians whose function is to consult and advise the medical director. Testimony was heard regarding a potential conflict of interest arising if a member served on the Blue Shield Advisory Committee and the Insurance and Prepayment Medical Care Committee of the N.S.M.A.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee considered the report and supplemental report of the Relative Value Study Committee in some depth, and we recommend the acceptance of the reports for information.

Your Reference Committee agrees that a physician is entitled to just compensation for preoperative and postoperative care.

Your Reference Committee recommends that revision of the 1965 Relative Value Study be disapproved. It further recommends that the Relative Value Study Committee consider the feasibility of developing a supplement which would include those procedures not included in the 1965 Relative Value Study.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #2 AS A WHOLE. This was approved.

Reference Committee #7

Members of your Reference Committee #7 were Drs. Arnold W. Lempka, Chairman; V. Franklin Colon, and Harold Friesen.

Your Reference Committee recommends the approval of the report of the Nebraska Delegate to the A.M.A. House of Delegates Annual Convention, June 20-24, 1971.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Policy Committee as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Public Relations Committee, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of Resolution #6, as submitted by Buffalo County Medical Society, as follows:

> WHEREAS, a treatment of chronic severe renal disease has been perfected to the degree that artificial dialysis and transplantation are accepted forms of treatment, and
>
> WHEREAS, the cost of such forms of treatment are more expensive than most people can afford and insurance companies often provide inadequate coverage, and
>
> WHEREAS, the State Department of Public Welfare at this time does not recognize dialysis and transplantation as forms of treatment to be supported through the use of State money, and
>
> WHEREAS, a number of States are providing this kind of care for their citizens and has been established in a large number of States, for the State to provide this care for citizens of the State; be it
>
> RESOLVED, that the Nebraska State Medical Association endorse legislation enabling the State of Nebraska to provide for reasonable cost of dialysis and transplantation for the Welfare recipients of Nebraska through existing departments in the State Government, and by the appointment of a Renal Advisory Board to advise existing departments regarding the modalities of treatment, and advisability of treatment of patients with serious renal disease.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Medical Service Committee with the deletion of that portion regarding the Medical Education Committee's report which is handled in detail in another committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #7 AS A WHOLE. This was approved.

Reference Committee #3

Members of your Reference Committee #3 were Drs. Russell Gorthey, Chairman; R. R. Andersen, and James Dunlap.

Your Reference Committee recommends the approval of the report of the Constitution and By-Laws Committee as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded, and there was discussion regarding a quorum for the House of Delegates, which is now twenty. It was moved by Dr. Goetowski that this matter should be reviewed by the Constitution and By-Laws Committee, and this was approved. This section of the Reference Committee report was approved as amended.

Your Reference Committee recommends the name change of **Board of Trustees** to the **Board of Directors,** where it appears in the Constitution and By-Laws. This is in compliance with existing state law.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends an addition to Article III, Section 1, of the Constitution to read as follows:

> "Component societies shall consist of those county and district medical societies, Nebraska house officers associations, and medical student associations, which now or may hereafter, hold charters from this Association."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #3 AS A WHOLE AS AMENDED. This was approved.

Reference Committee #4

Members of your Reference Committee #4 were Drs. P. B. Olsson, Chairman; W. J. Chleborad, and Marvin Holsclaw.

Your Reference Committee recommends the approval of the report of the Medicine and Religion Committee, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Ad-Hoc Committee on Physician's Assistant, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed regarding Item #3, under Conclusions to Date in this report. It was recommended that the first sentence be amended by adding the word "only" after the word certification, and deleting the remaining portion of the sentence. This was approved by the House, and this section of the Reference Committee report was approved as amended.

Your Reference Committee recommends the approval of the report of the Scientific Sessions Committee, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Allied Professions Committee, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of Maternal and Child Health Committee, as carried in the Handbook, with the addition to the recommendation in Paragraph 4, of, "where such requirement would jeopardize the health and welfare of such minor."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #4 AS A WHOLE AS AMENDED. This was approved.

Reference Committee #5

Members of your Reference Committee #5 were Drs. H. A. McConahay, Chairman; Robert Weldon, and Wm. Jensen.

Your Reference Committee recommends the approval of the report of the Mental Health and Mental Retardation Committee, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the State Peer Review Committee, as carried in the Handbook. We also recommend approval of the action of the Board of Councilors in regard to this report. Your Reference Committee recognizes the many problems inherent in the Peer Review mechanism and hope that the State Peer Review Committee will be prompt and flexible in their response to the necessary changes.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Rural Medical Service Committee, as carried in the Handbook with the changing of the word "active" to "financial" in the final **Resolved** of the resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of Resolution #1, as submitted by the Adams County Medical Society, as follows:

> WHEREAS the patients often keep their medications for many years and patients are more transient than in the past, and
>
> WHEREAS patients are under treatment with an increasing number of medications identification of which is often difficult, and in order to facilitate drug identification, therefore,
>
> BE IT RESOLVED that all prescribed medications should be labeled on the patient's bottle, unless otherwise specified by the physician.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed as to whether the generic or brand name should be used. This section of the Reference Committee report was approved.

Your Reference Committee recommends approval of Resolution #2, submitted by the Adams County Medical Society with the following amendment: change the word "limitation" to the word "maximum," in the **Resolved** portion of this resolution as follows:

> WHEREAS patients are becoming more transient, are seeing more than one physician, and keeping medications from past illnesses, and to prevent improper self medication, therefore,
>
> BE IT RESOLVED that all prescriptions should have a **maximum** of six refills, or six months, during which the medication can be filled, unless otherwise specified by the physician.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. Hhis was seconded. Following discussion, this section of the report was approved and the Chair directed that this resolution be referred to the Medical Service Committee for further study and clarification.

Your Reference Committee recommends approval of Resolution #5, as submitted by the Adams County Medical Society, as follows:

> WHEREAS, the present statutes concerning admission to a psychiatric hospital by the method of certification of a complainant and two physicians are unrealistic and ambiguous; and,
>
> WHEREAS, there continues to be a need for a procedure providing for emergency admission to a psychiatric hospital, in addition to the voluntary and commitment procedures; and,
>
> WHEREAS, the present requirement of examination by a second certifying physician sometimes is not fulfilled; now, therefore be it
>
> RESOLVED, that the Nebraska Medical Association recommend to the Nebraska Legislature the creation of statues concerning admission to a psychiatric hospital by certification which is clear, practical, protects the rights of the individual and requires examination and certification by one physician.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee agrees with the principle of the "Whereas" portions of Resolution #8, but on the basis of the "Resolved" portions submitted, recommends no action be taken on this resolution. Your Reference Committee further feels that this concept in the aforementioned resolution might well be applied to other professions. The resolution read as follows:

> WHEREAS, various effective, self-imposed mechanisms assuring quality control of medical care are already operational at local levels; and
>
> WHEREAS, the activities of other professionals such as the lawyer, mortician, the architect, and above all, the politician, are not shackled by coercive peer review; and,
>
> WHEREAS, imposition of such a philosophical concept upon an isolated profession as a political target becomes distinctly discriminatory, and is involuntary and therefore undemocratic; now, therefore be it
>
> RESOLVED, that in keeping with the dignity and principles of the individual, the membership of each component County Medical Society must be polled before the concept of so-called peer review is imposed upon the membership of the component medical society; and be it further

RESOLVED, that the will of the majority must be gained to enforce such an involuntary policing power; and be it further

RESOLVED, that the component County Society may elect to opt out of the parent State Association if the State Association seeks to compel the component society to submit to coercive peer review against the mandate of the membership.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved, and Dr. Gogela was granted permission of the floor for the following comments:

"As you recall, I introduced this resolution myself, and frankly I must admit, I am relieved that it wasn't adopted. In fact, I knew it wouldn't be.

"The real purpose of doing this actually was just for us to pause once more and really consider what we are doing with peer review. This illustrates how devisive this concept is for physicians."

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #5 AS A WHOLE. This was approved.

Reference Committee #6

Members of your Reference Committee #6 were Drs. Fred J. Rutt, Chairman; Paul Goetowski, and H. D. Feidler.

Your Reference Committee recommends the approval of the report of the Geriatrics Committee, as carried in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

In considering the report of the Emergency Medical Service Committee, our Reference Committee recommends two changes be implemented. In the fourth paragraph of this report pertaining to signs on the interstate highway system designating exits which go to recognized hospitals providing care for emergencies on a twenty-four hour basis, etc. It is recommended by your Reference Committee that signs designating hospitals not be limited to the interstate system; and second, the word "recognized" seems ambiguous and should perhaps be deleted. The Reference Committee commends the activity and report from the Emergency Medical Service Committee with these minor changes, and we recommend approval of the report of the Emergency Medical Committee, as contained in the Handbook.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee recommends the approval of the report of the Sub-Committee on Athletic Injuries.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee then considered the report of the Health Education in Schools and Colleges Committee as carried in the Handbook. Some discussion and consideration was given to the portion of this report concerning the employment of health education consultants, as to who the health education consultant might be and how the program might be implemented. No major changes were offered and the Reference Committee wishes to commend the Health Education in Schools and Colleges Committee on their fine report.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee then considered Resolution #3, as introduced by the Adams County Medical Society, as follows:

WHEREAS since the state of the present generation of nuclear-fission reactors produces a highly radio-active waste, that is currently being irretrievably deposited in the salt mines of Kansas, and

WHEREAS this constitutes a threat of radioactivity during its half life of many thousands of years, and

WHEREAS alternate sources of energy are available, which do not constitute this hazard, therefore,

BE IT RESOLVED that the Nebraska Medical Association send a petition in support of the Governor of Kansas opposing such burying of wastes and a petition in opposition to the future construction and utilization of fission reactors for generation of public power, and said petitions be communicated to the Governor and the Legislature of the State of Nebraska.

In considering this resolution, several points were brought forth. First, inadequate information is available at this time to consider this resolution. Second, it was felt premature to consider this resolution at this time without further information being available. Third, assistance and advice from the State Radiological Society and other state departments would seem desirable before considering this resolution. And fourth, it was felt by most members present that this delegation should not encumber ourselves with the world-wide problem of radioactive waste contamination. It was further felt that we should not take action in this regard until asked specifically to do so by some other specific agency. Your Reference Committee recommends that no action be taken on this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved.

Your Reference Committee then considered the report of the Medical Education Committee, as contained in the Handbook. Considerable discussion was held on this report. Dr. Ramsay, Chairman of the Committee, was in attendance as well as Dr. Kugel. Dr. Carlyle Wilson, Dr. Schenken and Dr. Thomas Gurnett, all spoke in strong opposition to that section of the report dealing with state licensures as outlined in Item #3, under the recommendations. Several medical students entered the discussion as well, and they were concerned with that portion of the report dealing with instructors. They expressed their feeling that there should be some method adopted to reward and promote skillful and desirable instructors and at the same time there should also be some method to dispose of those instructors who do not have adequate teaching ability.

Considerable discussion in opposition was then heard concerning Item #3, under "Recommendations," as mentioned.

It was pointed out by most discussants that there already exists on a voluntary basis quite acceptable postgraduate training programs in the various specialties. Dr. Wilson alluded to the fact that this program was completely contradictory to previous resolutions adopted by this body as well as the A.M.A.

It was further pointed out that the problem of postgraduate education and training was essentially an individual problem and further that this segment of the profession represented indeed a small percentage perhaps 2½% to 3% of the entire profession in Nebraska. Additionally it was pointed out that no governmental rule or regulation would be effective in coercing or making certain that those few individuals who did not participate in postgraduate education could be compelled to comply with any degree of certainty. Strong opposition to the question of the State Licensure Law, to the question of the certification and recertification of licencees, and strong opposition to the public dissemination of information concerning the recertification of licensees was voiced by almost each and every discussant. It was also pointed out in length by Dr. Schenken that as soon as the question of a license is at issue, the problem shortly becomes a political issue and no longer a medical problem.

Your Reference Committee at this time recommends adoption of the first portion of this Medical Education Committee report, that is up to the portion which makes recommendations. Your Reference Committee further recommends that the remaining portion of the report containing the committee recommendations be rejected. Your Reference Committee further recommends that this committee or a similar committee be reactivated, that all physicians within the state be apprised of open meetings and hearings regarding this issue, and more study from a wider audience among the entire membership be obtained for further consideration.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was approved unanimously by the House.

Dr. Wilson said that there had been discussion in Reference Committee that all members of the Association should be informed of this report and the actions of the House prior to these open meetings, and he moved that the Executive Secretary communicate to the entire N.S.M.A. this entire report with the actions of the House of Delegates. This was approved.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #6 AS A WHOLE. This was approved.

Dr. McFadden called for the acceptance of the report of the Board of Councilors as an entire report, and this was approved.

Dr. Steenburg, Chairman of the Constitution and By-Laws Committee, recommended that Student Membership dues be set at $10.00 per year, and House Officer Membership dues at $15.00 per year. This was approved by the House unanimously.

Dr. Wilson was granted permission of the floor for the following request:

"It is the request of the Delegates of the Omaha-Douglas County Medical Society that the Speaker of the House of Delegates assign to whatever committee he feels appropriate the task of interpreting the April, 1969, Ad-Hoc Insurance Study Committee report.

"The main issue we wish clarified is whether or not the report binds all doctors of the Nebraska State Medical Association to adhere to provisions of future contracts issued by Blue Shield, from that date forward, in the area of the usual, customary and reasonable fee concept as full payment, in the absence of a prior agreement with the patient, utilized with the Peer Review mechanism.

"Also does the report infer that all physicians in the Nebraska State Medical Association are participating physicians in these contracts.

"Blue Shield of Nebraska reports that more than 99% of physicians have cooperated with the usual, customary and reasonable fee concept. This should make it clear that binding compulsion is not necessary and that Peer Review should be able to adjudicate most of the insignificant number of controversies.

"We respectfully request that this report be given to the House of Delegates at the next session."

Dr. McFadden ruled that this request would be referred, as requested, to the appropriate committee of the Association for study because there was no time available for study of this matter at the present session of the House of Delegates.

Dr. Mason introduced Dr. Philippe Shubik, Director of the University of Nebraska Eppley Institute. Dr. Shubik said that a study of pollutants and the effect these agents may have on health in Nebraska is being undertaken at the University of Nebraska Medical Center. He said he thought medicine should take a lead in making a study of this, and he asked for the help and cooperation of the Association.

There being no further business, the meeting was adjourned.

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FRANK COLE, M.D.
Editor

KENNETH NEFF
Business Manager

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Patients fell asleep quickl

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.[1,2]

Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

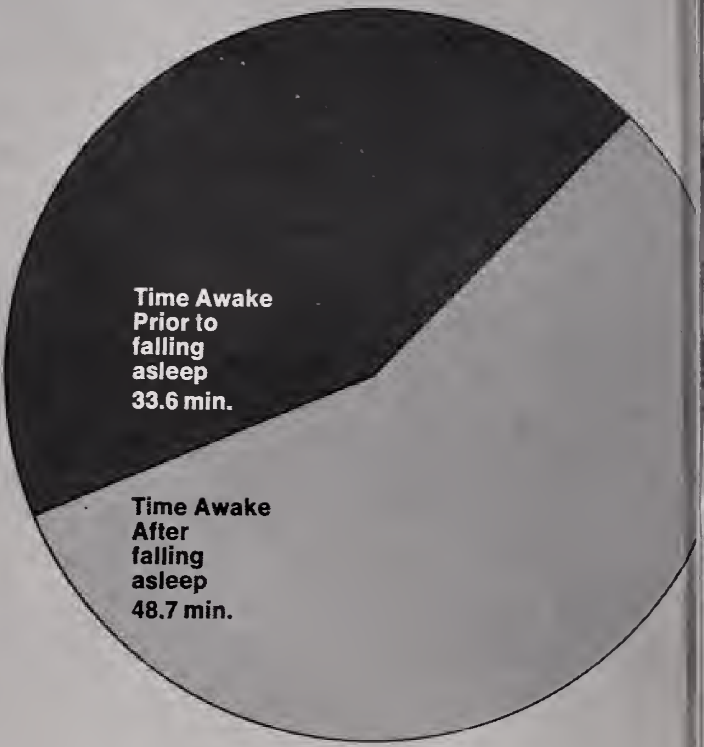
These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

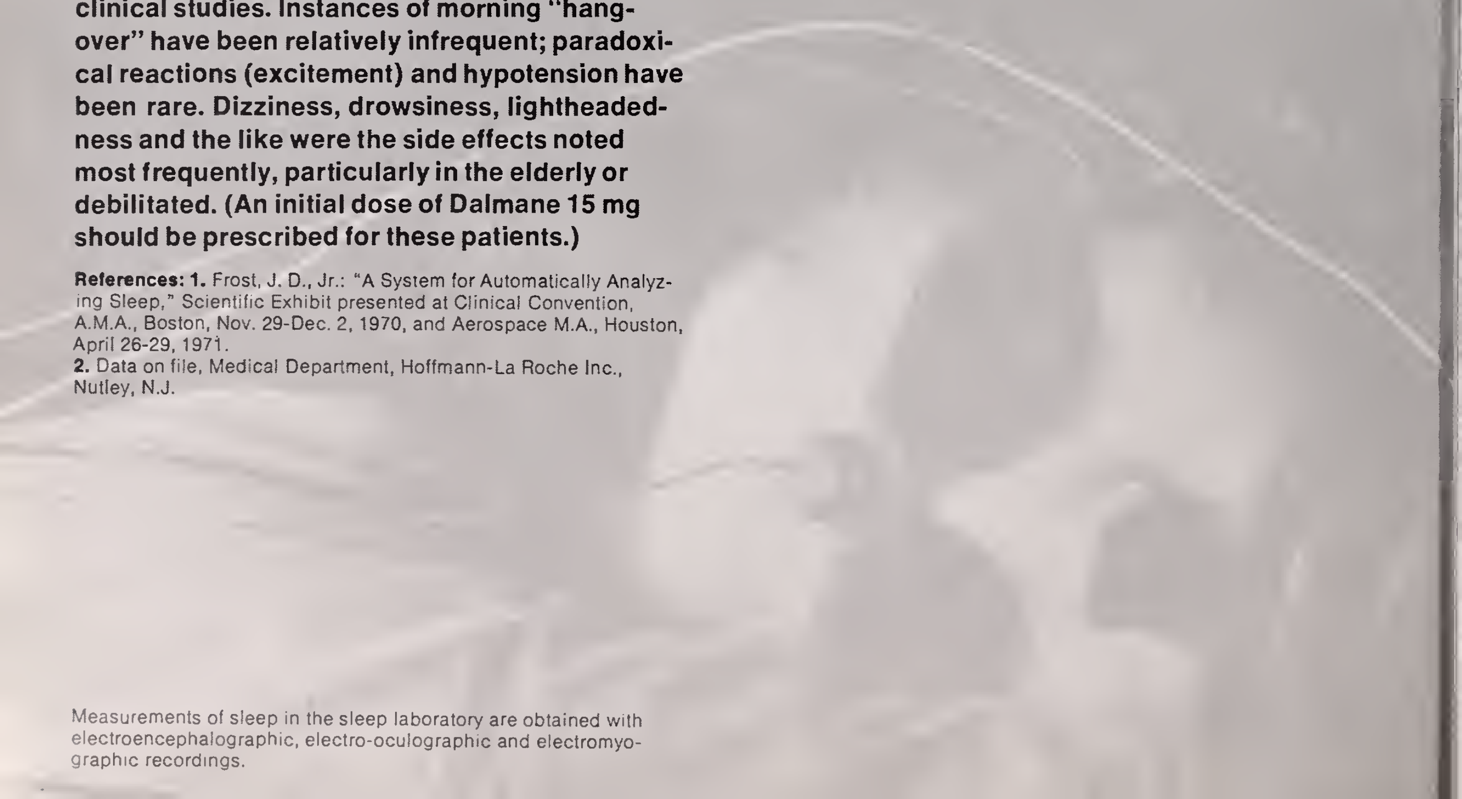
Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hangover" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

References: 1. Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

Before Dalmane (flurazepam HCl)





Measurements of sleep in the sleep laboratory are obtained with electroencephalographic, electro-oculographic and electromyographic recordings.

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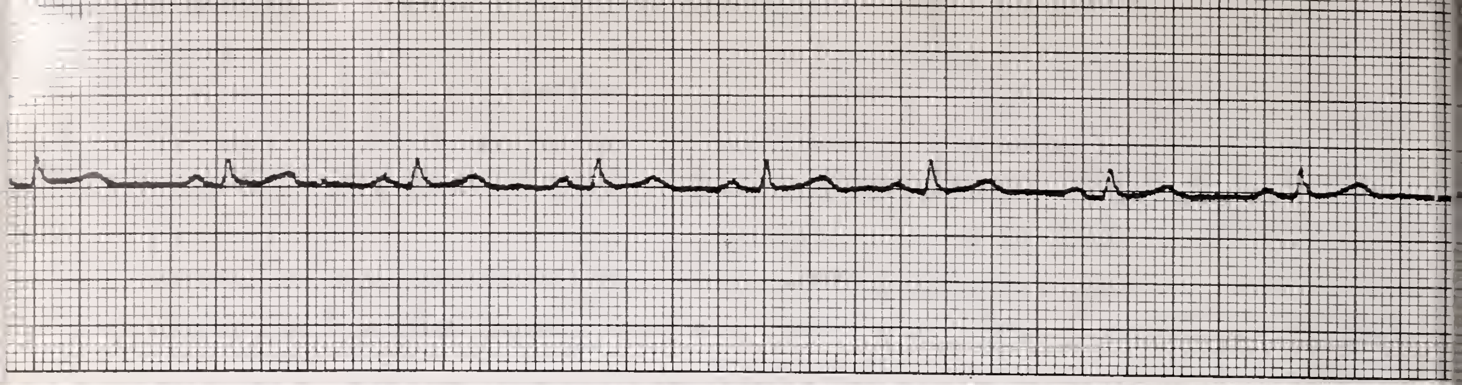

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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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